(FILE 'HOME' ENTERED AT 17:20:46 ON 31 JUL 2002)

FILE 'BIOSIS, CABA, CAPLUS, EMBASE, LIFESCI, MEDLINE, SCISEARCH, USPATFULL, JAPIO' ENTERED AT 17:21:21 ON 31 JUL 2002

L1	0	S KLAUSER/AU
L2	19	S KLAUSER, THOMAS/AU
L3	12	DUP REM L2 (7 DUPLICATES REMOVED)
L4	396	S AUTOTRANSPORTER
L5	316084	S GRAM NEGATIVE OR ENTERBACTERIOCEAE
L6	195	S L4 AND L5
L7	83	DUP REM L6 (112 DUPLICATES REMOVED)
L8	1109536	S VECTOR OR PLASMID
L9	23	S L8 AND L7
L10	5	S L9 AND SECRETION

L3 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2002 ACS
AB Method and plant for the treatment of soils polluted by heavy metal compds. based on the use of Penicillium and Aspergillus fungi. The method includes the following steps: isolating and selecting the soil; mixing the soil to be treated with microorganisms and sterilized edible materials; keeping the mixt. of soil, edible materials and microorganisms damp by adding water and/or a sugary soln., keeping the mixt. aerated by injecting and/or sucking in air, keeping the mixt. at pH 2-10; and providing adequate and suitable conditions for drainage of heavy metal compd. solns. from the treated soil.
AN 2002:427652 CAPLUS
DN 137:10411
TI Method for the treatment of soils polluted by heavy metal compounds and related plant of treatment
IN Schinner, Franz; Huber, Walter; **Klauser, Thomas**
PA Atzwanger, Michael, Italy
SO Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1210990	A2	20020605	EP 2001-830743	20011203
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI IT 2000-RM631	A	20001201		
IT 2000-RM632	A	20001201		

L3 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2002 ACS
AB A Monod-type model was established for the description of the substrate kinetics for a Mut+-strain of Pichia pastoris secreting recombinant human chymotrypsinogen B. The model is characterized by the values for .mu.max=0.084/h and KM .apprxeq.0.22 g/L describing growth on Met as the sole substrate. The product formation was characterized by a similar model exhibiting a max. biomass-specific product-formation-rate of 0.23 mg/g/h and a KM-value of 0.13 g/L. Met concns. exceeding a crit. value tended to destabilize the phenotypic integrity of Pichia prodn. strains. Continuous fermn. at Met concns. >4 g/L could not be performed without an irreversible collapse of productivity. Even lower Met setpoints often resulted in phenotypic destabilization indicating that a transient overshoot is sufficient to trigger this phenomenon. It is concluded that continuous fermn. offers a valuable approach for the prodn. of recombinant proteins with P. pastoris and is an efficient tool for the detn. of kinetic data.
AN 2002:74773 CAPLUS
DN 136:133669
TI Recombinant protein production with Pichia pastoris in continuous fermentation - kinetic analysis of growth and product formation
AU Curvers, Simon; Linnemann, Jorg; **Klauser, Thomas**; Wandrey, Christian; Takors, Ralf
CS Institute of Biotechnology 2, Research Center Juelich, Juelich, D-52425, Germany
SO Chemie Ingenieur Technik (2001), 73(12), 1615-1621
CODEN: CITEAH; ISSN: 0009-286X
PB Wiley-VCH Verlag GmbH
DT Journal
LA German
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1

AB Based on an integrated approach of genetic engineering, fermentation process development, and downstream processing, a fermentative chymotrypsinogen B production process using recombinant Pichia pastoris is presented. Making use of the P. pastoris AOX1-promotor, the demand for methanol as the single carbon source as well as an inducer of protein secretion enforced the use of an optimized feeding strategy by help of on-line analysis and an advanced controller algorithm. By using an experimental system of six parallel sparged column bioreactors, proteolytic product degradation could be minimized while also optimizing starting conditions for the following downstream processing. This optimization of process conditions resulted in the production of authentic chymotrypsinogen at a final concentration level of 480 mgcntdotL-1 in the whole broth and a biomass concentration of 150 gcntdotL-1 cell dry weight, thus comprising a space-time yield of 5.2 mgcntdotL-1cntdoth-1. Alternatively to the high cell density fermentation approach, a continuous fermentation process was developed to study the effects of reduced cell density toward oxygen demand, cooling energy, and biomass separation. This development led to a process with a highly increased space-time yield of 25 mgcntdotL-1cntdoth-1 while reducing the cell dry weight concentration from 150 gcntdotL-1 in fed-batch to 65 gcntdotL-1 in continuous cultivation.
AN 2001:441088 BIOSIS
DN PREV200100441088
TI Human chymotrypsinogen B production with Pichia pastoris by integrated development of fermentation and downstream processing. Part 1. Fermentation.
AU Curvers, Simon; Brixius, Peter; **Klauser, Thomas**; Thoemmes, Joerg; Weuster-Botz, Dirk; Takors, Ralf (1); Wandrey, Christian
CS (1) Institute of Biotechnology, Research Center Juelich, D-52425, Juelich Germany
SO Biotechnology Progress, (May June, 2001) Vol. 17, No. 3, pp. 495-502. print.
ISSN: 8756-7938.
DT Article
LA English
SL English

L3 ANSWER 4 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AB The present invention relates to bacteria for preparing stable fusion prons from a carrier protein and a passenger protein, the bacteria possessing the genetic marker fpt. This genetic marker permits the improved preparation of protein fusions having a destabilizing effect on bacteria. The present invention in particular relates to bacteria for preparing fusion proteins, the bacteria stably presenting the fusion proteins on their surface and possessing the markers ompT-- and dsbA-- in addition to the genetic marker fpt. Moreover, the present invention relates to the identification of bacteria, which present heterologous proteins having an affinity to a binding partner on its surface and methods for constructing vectors encoding these proteins. Finally, the present invention also relates to bacteria which stably present at least one fusion protein on their surface and possess the genetic markers fpt, ompT-- and dsbA--, and their use for instance for diagnostic purposes.
AN 2000:417017 BIOSIS
DN PREV200000417017
TI Bacteria for preparing stable fusion proteins and methods for detecting the same.
AU **Klauser, Thomas (1)**; Kramer, Joachim; Meyer, Thomas F.; Pohlner, Johannes
CS (1) Fellbach Germany
ASSIGNEE: Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V., Berlin, Germany
PI US 6040141 March 21, 2000
SO Official Gazette of the United States Patent and Trademark Office Patents,

(Mar. 21, 2000) Vol. 1232, No. 3, pp. No pagination. e-file.
ISSN: 0098-1133.
DT Patent
LA English

L3 ANSWER 5 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3
AB The Iga-beta autotransporter function of IgA1 protease from Neisseria gonorrhoeae was assessed in Escherichia coli using the Vibrio cholerae toxin B subunit (CtxB) as a heterologous passenger. N-terminal fusions with Iga-beta of native CtxB or mutant CtxB protein containing no cysteines were constructed and analysed in isogenic E. coli mutants carrying defects in either or both the ompT (outer membrane protease T) and dsbA (periplasmic disulfide oxidoreductase) determinants. While export of the cystein-less CtxB passenger was independent of the dsbA genotype, the native CtxB passenger was properly translocated across the outer membrane only in the dsbA mutant background. This effect was consistent in the presence and in the absence of the OmpT protease which rather determined the release of surface-bound CtxB into the medium. Therefore, in agreement with previous observations Iga-beta-dependent protein secretion requires an unfolded conformation of the passenger domain and can be blocked by disulfide loop formation in the presence of DsbA. Since DsbA acts in the periplasm, this provides evidence for a periplasmic intermediate in the Iga-beta-mediated export pathway. E. coli (dsbA ompT) is highly suitable as a strain for the surface display of recombinant proteins via Iga-beta, whether or not they contain cysteine residues.
AN 1996:574489 BIOSIS
DN PREV199799289170
TI Absence of periplasmic DsbA oxidoreductase facilitates export of cysteine-containing passenger proteins to the Escherichia coli cell surface via the Iga-beta autotransporter pathway.
AU Jose, Joachim (1); Kraemer, Joachim; **Klauser, Thomas**; Pohlner, Johannes; Meyer, Thomas F.
CS (1) Max-Planck-Inst. Biol., Abteilung Infektionsbiol., Spemannstrasse 34, D-72076 Tuebingen Germany
SO Gene (Amsterdam), (1996) Vol. 178, No. 1-2, pp. 107-110.
ISSN: 0378-1119.
DT Article
LA English

L3 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2002 ACS
AB Bacterial expression hosts (preferably Escherichia coli) carrying a mutation in the fpt gene are used to manuf. fusion proteins because of the greater stability of fusion proteins in this background. In addn., ompT- and dsbA- mutations also allow surface presentation of the fusion protein on the surface of the cell. These cells can then be used as anal. reagents, e.g. in diagnostics. The use of cells carrying these markers to present Ig variable regions on their surface is demonstrated.
AN 1995:690163 CAPLUS
DN 123:76438
TI Bacterial strains that allow the stable manufacture of fusion proteins and their presentation on the cell surface and their analytical and industrial uses
IN Meyer, Thomas F.; Pohlner, Johannes; Kraemer, Joachim; **Klauser, Thomas**
PA Max-Planck-Gesellschaft zur Foerderung der Wissenschaften eV, Germany
SO Ger. Offen., 18 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4344350	A1	19950629	DE 1993-4344350	19931223

	DE 4344350	C2	19950921		
	WO 9517509	A1	19950629	WO 1994-EP4286	19941222
	W: JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 731837	A1	19960918	EP 1995-905579	19941222
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 11514201	T2	19991207	JP 1994-517207	19941222
	US 6040141	A	20000321	US 1996-666354	19960923
PRAI	DE 1993-4344350		19931223		
	WO 1994-EP4286		19941222		

L3 ANSWER 7 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4

AB A glycine-histidine tag (Gly-3His-6) was added to the C-terminus of a fusion protein consisting of the cholera toxin B-subunit (CtxB) and the IgA protease beta-domain (Iga-beta). The aim was to facilitate single-step purification and to create a suitable tool for kinetic and structural studies on Iga beta-driven protein translocation across the outer membrane of Gram-negative bacteria. We demonstrate that the glycine-histidine tag does not interfere with the assembly of Iga-beta in the outer membrane and that the translocator function of the modified Iga-beta is maintained. The applicability of the new construct for the dissection of the Iga-beta mediated translocation process and general aspects of C-terminal histidine tagging of outer membrane proteins are discussed.

AN 1995:222984 BIOSIS

DN PREV199598237284

TI C-terminal glycine-histidine tagging of the outer membrane protein Iga-beta of Neisseria gonorrhoeae.

AU Strauss, Andreas; Pohlner, Johannes; **Klauser, Thomas**; Meyer, Thomas F. (1)

CS (1) Max-Planck-Inst. Biol., Abt. Infektionsbiol., Spemannstrasse 34, D-72076 Tuebingen Germany

SO FEMS Microbiology Letters, (1995) Vol. 127, No. 3, pp. 249-254. ISSN: 0378-1097.

DT Article

LA English

L3 ANSWER 8 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5

AN 1994:188303 BIOSIS

DN PREV199497201303

TI The secretion pathway of IgA protease-type proteins in Gram-negative bacteria.

AU **Klauser, Thomas**; Pohlner, Johannes; Meyer, Thomas F.

CS Max-Planck-Inst. Biologie, Abteilung Infektionsbiologie, Spemannstrasse 34, D-72076 Tuebingen Germany

SO Bioessays, (1993) Vol. 15, No. 12, pp. 799-805. ISSN: 0265-9247.

DT General Review

LA English

L3 ANSWER 9 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 6

AB Extracellular transport of Neisseria IgA proteases across the bacterial outer membrane is accomplished by the translocation function contained within the C-terminal Iga-beta domain of IgA protease precursor proteins. Recently, we reported that Iga-beta from N. gonorrhoeae MS11 (Val1097 to Phe1505), fused to a periplasmic passenger protein, facilitated its transport across the outer membrane, leading to surface exposure of the passenger. In the present work we show, by systematic N-terminal truncation of Iga-beta, that the functional and structural unit, termed Iga-beta-core, corresponds to the C-terminal approximately 274 amino acid residues (Ser1231 to Phe1505). This minimal region retains all the essential features necessary for the translocation of an N-terminally

attached passenger across the outer membrane of Escherichia coli, and for its own correct integration into the outer membrane, even in the absence of a passenger protein. The membrane-integrated Iga-beta-core constitutes a conserved entity found in the C-terminal regions of Iga-beta domains of different N. gonorrhoeae, N. meningitidis and Haemophilus influenzae strains. In contrast, the surface-exposed N termini of the Iga-beta domains vary in size and sequence. Based on secondary structure predictions, the key structural feature of the core is a beta-barrel (amphipathic, antiparallel transmembrane beta-strands, interspersed by hairpin turns and loops) which is common to many integral outer membrane proteins of Gram-negative bacteria. We propose that the core has been conserved in evolution, to provide a selective outer membrane export channel for covalently attached polypeptides.

AN 1994:116353 BIOSIS
DN PREV199497129353
TI Characterization of the Neisseria Iga-beta-core: The essential unit for outer membrane targeting and extracellular protein secretion.
AU **Klauser, Thomas**; Kraemer, Joachim; Otzelberger, Karin; Pohlner, Johannes; Meyer, Thomas F.
CS Max-Planck-Inst. Biol. Abt. Infektionsbiol., Spemannstrasse 34, D-72076 Tuebingen Germany
SO Journal of Molecular Biology, (1993) Vol. 234, No. 3, pp. 579-593. ISSN: 0022-2836.
DT Article
LA English

L3 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2002 ACS
AB The C-terminal domain (Iga.beta.) of the Neisseria IgA protease precursor is involved in the transport of covalently attached proteins across the outer membrane of Gram-neg. bacteria. Outer membrane transport in E. coli was investigated using fusion proteins consisting of an N-terminal signal sequence for inner membrane transport, the Vibrio cholerae toxin B subunit (CtxB) as a passenger, and Iga.beta.. The process probably involves 2 distinct steps: integration of Iga.beta. into the outer membrane and translocation of the passenger across the membrane. The outer membrane integrated part of Iga.beta. is the C-terminal 30 kDa core, which serves as a translocator for both the passenger and the linking region situated between the passenger and Iga.beta. core. The completeness of the translocation is demonstrated by the extracellular release of the passenger protein owing to the action of the E. coli outer membrane OmpT protease. Translocation of the CtxB moiety occurs efficiently under conditions preventing intramol. disulfide bond formation. In contrast, if disulfide bond formation in the periplasm proceeds, then translocation halts after the export of the linking region. In this situation, transmembrane intermediates are generated which give rise to characteristic fragments resulting from rapid proteolytic degrdn. of the periplasmically trapped portion. Based on the identification of translocation intermediates, it is proposed that the polypeptide chain of the passenger passes in a linear fashion across the bacterial outer membrane.

AN 1992:444303 CAPLUS
DN 117:44303
TI Selective extracellular release of cholera toxin B subunit by Escherichia coli: dissection of Neisseria Iga.beta.-mediated outer membrane transport
AU **Klauser, Thomas**; Pohlner, Johannes; Meyer, Thomas F.
CS Abt. Infektionsbiol., Max-Planck-Inst. Biol., Tuebingen, D-7400, Germany
SO EMBO J. (1992), 11(6), 2327-35
CODEN: EMJODG; ISSN: 0261-4189
DT Journal
LA English

L3 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS
AB Sequence-specific enzymic cleavage of protein fusions is an important application in recombinant protein technol. The authors have used the

Neisseria type 2 IgA protease (EC 3.4.24.13), produced and secreted by Escherichia coli host cells, for efficiently processing polypeptides at authentic or engineered target sites. In different substrates, the microbial protease specifically cleaves the peptide bond distal to the second Pro residue of the sequence Yaa-Pro-|-Xaa-Pro, where Yaa stands for Pro (or rarely for Pro in combination with Ala, Gly or Thr) and Xaa stands for Thr, Ser or Ala. Highly specific proteolysis has been obtained not only with sol. and purified protein fusions but also with insol. aggregates derived from cytoplasmic inclusion bodies. The sequence-specificity and simple prodn. of the recombinant IgA protease mke it a versatile tool for the in vitro processing of recombinant proteins.

AN 1992:590258 CAPLUS
DN 117:190258
TI Sequence-specific cleavage of protein fusions using a recombinant Neisseria type 2 IgA protease
AU Pohlner, Johannes; **Klauser, Thomas**; Kuttler, Elke; Halter, Roman
CS Abt. Infektionsbiol., Max-Planck-Inst. biol., Tuebingen, D-7400, Germany
SO Bio/Technology (1992), 10(7), 799-804
CODEN: BTCHDA; ISSN: 0733-222X
DT Journal
LA English

L3 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2002 ACS
AB The .beta.-domain of the Neisseria IgA protease precursor (Iga) provides the essential transport function for the protease across the outer membrane. To investigate the secretion function of the .beta.-domain (Iga.beta.), hybrid proteins were engineered between Iga.beta. and the nontoxic 12 kd cholera toxin B subunit (CtxB) and their targeting behavior in Salmonella typhimurium was examd. CtxB-Iga.beta. hybrid proteins integrate into the outer membrane, leading to the exposition of the CtxB moiety on the cell surface. Exposed CtxB can be degraded by externally added proteases like trypsin, but can also be specifically cleaved off from membrane-assocd. Iga.beta. by purified IgA protease. Folding of the CtxB moiety at the periplasmic side of the outer membrane interfaces with its translocation. Prevention of disulfide-induced folding in periplasmic CtxB renders the protein moiety competent for outer membrane transport. Iga.beta. may be of general interest as an export vehicle for even larger proteins from Gram-neg. bacteria.

AN 1990:510703 CAPLUS
DN 113:110703
TI Extracellular transport of cholera toxin B subunit using Neisseria IgA protease .beta.-domain: conformation-dependent outer membrane translocation
AU **Klauser, Thomas**; Pohlner, Johannes; Meyer, Thomas F.
CS Abt. Infektionsbiol., Max-Planck-Inst. Biol., Tuebingen, D-7400, Fed. Rep. Ger.
SO EMBO J. (1990), 9(6), 1991-9
CODEN: EMJODG; ISSN: 0261-4189
DT Journal
LA English

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L9 ANSWER 1 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB **Gram-negative** bacterial proteins which are exported from the cytosol to the external environment by the type V secretion system are also known as **autotransporters**. Once translocated to the periplasmic compartment by the sec-dependent general secretory pathway, their C-terminal domain forms a pore through which the N-terminal domain travels to the outer membrane without the need of other accessory proteins. MisL (protein of membrane insertion and secretion) is a protein of unknown function located in the pathogenicity island SPI-3 of Salmonella enterica and classified as an **autotransporter** due to its high homology to Escherichia coli AIDA-I. In the present work, the MisL C-terminal translocator domain was used to display the immunodominant B-cell epitope of the circumsporozoite protein (CSP) from Plasmodium falciparum on the surface of Salmonella enterica serovar Typhimurium (serovar Typhimurium SL3261) and serovar Typhi (serovar Typhi CVD 908). The MisL beta domain was predicted by alignment with AIDA-I, amplified from serovar Typhimurium SL3261, cloned in a **plasmid** fused to four repeats of the tetrapeptide NANP behind the Escherichia coli heat-labile enterotoxin B subunit signal peptide to ensure periplasmic traffic, and expressed under the control of the anaerobically inducible nirB promoter. The fusion protein was translocated to the outer membrane of both bacterial strains, although the foreign epitope was displayed more efficiently in serovar Typhimurium SL3261, which elicited a better specific antibody response in BALB/c mice. More importantly, antibodies were able to recognize the native CSP in P. falciparum sporozoites. These results confirm that MisL is indeed an **autotransporter** and that it can be used to express foreign immunogenic epitopes on the surface of **gram-negative** bacteria.

AN 2002:402587 BIOSIS

DN PREV200200402587

TI Expression of the Plasmodium falciparum immunodominant epitope (NANP)4 on the surface of Salmonella enterica using the **autotransporter** MisL.

AU Ruiz-Perez, Fernando; Leon-Kempis, Rocio; Santiago-Machuca, Araceli; Ortega-Pierres, Guadalupe; Barry, Eileen; Levine, Myron; Gonzalez-Bonilla, Cesar (1)

CS (1) Hospital de Infectologia "Dr. Daniel Mendez Hernandez," Centro Medico "La Raza, IMSS, Apartado Postal 15-095, Mexico, D.F.: bonilla@conacyt.mx Mexico

SO Infection and Immunity, (July, 2002) Vol. 70, No. 7, pp. 3611-3620. print. ISSN: 0019-9567.

DT Article

LA English

L9 ANSWER 2 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB The genus Bartonella comprises human-specific and zoonotic pathogens responsible for a wide range of clinical manifestations, including Carrion's disease, trench fever, cat scratch disease, bacillary angiomatosis and peliosis, endocarditis and bacteremia. These arthropod-borne pathogens typically parasitise erythrocytes in their mammalian reservoir host(s), resulting in a long-lasting haemotropic infection. We have studied the process of Bartonella erythrocyte parasitism by tracking green fluorescent protein-expressing bacteria in the blood of experimentally infected animals. Following intravenous infection, bacteria colonise a yet enigmatic primary niche, from where they are seeded into the blood stream in regular intervals of apprxfive days. Bacteria invade mature erythrocytes, replicate temporarily and persist in this unique intracellular niche for the remaining life span of the infected erythrocytes. A triggered antibody response typically results in an abrogation of bacteremia within 3 months of infection, likely by blocking new waves of bacterial invasion into erythrocytes. The recent establishment of genetic tools for Bartonella spp. permitted us to identify several putative pathogenicity determinants. Application of differential fluorescence induction technology resulted in the isolation

of bacterial genes differentially expressed during infection in vitro and in vivo, including an unknown family of **autotransporter** proteins as well as a novel type IV secretion system homologous to the conjugation system of E. coli **plasmid** R388. Mutational analysis of a previously described type IV secretion system displaying homology to the virB locus of Agrobacterium tumefaciens provided the first example of an essential pathogenicity locus in Bartonella. Though required for establishing haemotropic infection, it remains to be demonstrated if this type IV secretion system is necessary for colonisation of the primary niche or for the subsequent colonisation of erythrocytes.

AN 2002:331073 BIOSIS
DN PREV200200331073
TI Bacterial persistence within erythrocytes: A unique pathogenic strategy of Bartonella spp.
AU Seubert, Anja; Schulein, Ralf; Dehio, Christoph (1)
CS (1) Department of Molecular Microbiology, Biozentrum, University of Basel, Klingelbergstrasse 70, CH-4056, Basel: christoph.dehio@unibas.ch Switzerland
SO IJMM International Journal of Medical Microbiology, (February, 2002) Vol. 291, No. 6-7, pp. 555-560. print.
ISSN: 1438-4221.
DT General Review
LA English

L9 ANSWER 3 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB The **plasmid**-encoded AIDA (adhesin involved in diffuse adherence) **autotransporter** protein derived from diffuse-adhering clinical Escherichia coli isolate 2787 and the TibA (enterotoxigenic invasion locus B) protein encoded by the chromosomal tib locus of enterotoxigenic E. coli (ETEC) strain H10407 are posttranslationally modified by carbohydrate substituents. Analysis of the AIDA-I adhesin showed that the modification involved heptose residues. AIDA-I is modified by the heptosyltransferase activity of the product of the aah gene, which is located directly upstream of adhesin-encoding gene aidA. The carbohydrate modification of the TibA adhesin/invasin is mediated by the TibC protein but has not been elucidated. Based on the sequence similarities between TibC and AAH (**autotransporter** adhesin heptosyltransferase) and between the TibA and the AIDA proteins we hypothesized that the AIDA system and the Tib system encoded by the tib locus are structurally and functionally related. Here we show that (i) TibC proteins derived from different ETEC strains appear to be highly conserved, (ii) recombinant TibC proteins can substitute for the AAH heptosyltransferase in introducing the heptosyl modification to AIDA-I, (iii) this modification is functional in restoring the adhesive function of AIDA-I, (iv) a single amino acid substitution at position 358 completely abolishes this activity, and (v) antibodies directed at the functionally active AIDA-I recognize a protein resembling modified TibA in ETEC strains.. In summary, we conclude that, like AAH, TibC represents an example of a novel class of heptosyltransferases specifically transferring heptose residues onto multiple sites of a protein backbone. A potential consensus sequence for the modification site is suggested.
AN 2002:296961 BIOSIS
DN PREV200200296961
TI Functional substitution of the TibC protein of enterotoxigenic Escherichia coli strains for the **autotransporter** adhesin heptosyltransferase of the AIDA system.
AU Moormann, Corinna; Benz, Inga; Schmidt, M. Alexander (1)
CS (1) Institute of Infectiology-ZMBE, Von-Esmarch-Str. 56, D-48149, Muenster: infekt@uni-muenster.de Germany
SO Infection and Immunity, (May, 2002) Vol. 70, No. 5, pp. 2264-2270. print.
ISSN: 0019-9567.
DT Article
LA English

L9 ANSWER 4 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Enteroaggregative Escherichia coli (EAEC), an increasingly recognized cause of persistent diarrhea in children in developing countries, has been defined by their aggregative adhesion phenotype. Several virulence-related genes have been described for prototype EAEC strain 042. Pet enterotoxin is encoded in the 65 MDa virulence **plasmid** and shows a high homology with the type IV class **autotransporter**-secreted proteins. It has also been shown that Pet induces enterotoxic and cytotoxic effects in tissue culture cells and rat ileal segments. Considering the clinical significance of EAEC as an emerging pathogen, specific detection methods are required to identify toxin-producing isolates. Two synthetic oligonucleotide primers were designed and used in PCR reactions to detect a 837 base pairs sequence of pet in prototype EAEC strains. The BsteII restriction fragment assay of PCR products gave the profile expected for the pet amplified nucleotide sequence. Additionally, a pet-specific DNA probe derived from the amplicon was used for the identification of pet-positive EAEC strains in colony blots. We have demonstrated the specificity of PCR reactions and probe hybridizations to detect the pet sequence in clinical isolates and reference cultures of EAEC. Amplification products were not detected in EPEC, EHEC, ETEC and other pathogens. Among 25 EAEC isolates from infants with acute diarrhea, 11 (44%) were pet-positive whereas 10 (62.5%) of 16 isolates from healthy controls were pet-positive. These results suggested that pet-positive EAEC isolates were not associated to acute diarrhea in the group studied. The PCR employed in this study proved to be specific and a very useful method for detection of Pet gene.

AN 2002:188847 BIOSIS

DN PREV200200188847

TI Detection of the **plasmid**-encoded enterotoxin (Pet) gene in enteroaggregative Escherichia coli (EAEC) by the polymerase chain reaction (PCR.

AU Luna, M. G. (1); Yoshida, C. H. (1); Andrade, J. R. C. (1); Rosa, A. C. P. (1)

CS (1) Universidade do Estado do Rio de Janeiro, Rio de Janeiro Brazil

SO Abstracts of the General Meeting of the American Society for Microbiology, (2001) Vol. 101, pp. 259. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 101st General Meeting of the American Society for Microbiology Orlando, FL, USA May 20-24, 2001
ISSN: 1060-2011.

DT Conference

LA English

L9 ANSWER 5 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Enteroaggregative E. coli (EAEC) strains, have been associated with diarrhea disease in children, and with both nosocomial and community diarrhea outbreaks worldwide. Pet (**plasmid**-encoded toxin) and Pic (protein involved in colonization) are two proteins included in SPATE (serine protease **autotransporters** of Enterobacteriaceae) family, secreted by EAEC strains. Different in vitro assays demonstrated the participation of both proteins in cellular damage. In this study was analyzed the expression of Pet and Pic in 131 EAEC strains (selected by their adherence pattern to HEp-2 cells), isolated from children with (88) and without diarrhea (43). The strains of children with diarrhea were from acute, persistent or bloody diarrhea cases. The expression of Pet and Pic was determined by western-immunoblot using specific rabbit antibodies. The obtained result showed that of the 43 EAEC strains isolated from asyntomatic children 2 (5%) expressed Pic and 5 (12%) Pet. On the other hand of the 88 EAEC strains isolated from children with diarrhea, 36 (41%) and 25 (28%), were Pic and Pet producers respectively. The statistic analysis comparing the Pic and Pet expression between strains isolated from the different diarrhea cases and asyntomatic children, showed in acute diarrhea 13/31 Vs 2/43 (p 0.0002) of the EAEC strains as Pic producers and 11/31 Vs 5/43 (p 0.03) that expressed Pet. In persistent

diarrhea the results showed 5/12 Vs 2/43 (p 0.003) for Pic production and 5/12 Vs 5/43 (p 0.03) for Pet. Finally in the EAEC strains isolated from bloody diarrhea, similar statistic differences in the expression of Pic 15/39 Vs 2/43 (p 0.0002) and Pet 7/39 Vs 5/43 (p 0.03) were observed. The obtained results suggest that Pic and Pet have importance in the virulence of some EAEC strains isolated from children with diarrhea.

AN 2002:176502 BIOSIS

DN PREV200200176502

TI Expression of Pet and Pic the serine proteases from enteroaggregative Escherichia coli, in strains isolated from Mexican children with and without diarrhea.

AU Hernandez, U. (1); Villaseca, J. (1); Navarro, A. (1); Cravioto, A. (1); Trujillo, F. (1); Hernandez, J. M. (1); Leon, L. A. (1); Mendez, J. L. (1); Licona, D. (1); Perez, G. (1); Eslava, C. A. (1)

CS (1) Faculty of Medicine, UNAM, Mexico Mexico

SO Abstracts of the General Meeting of the American Society for Microbiology, (2001) Vol. 101, pp. 92. http://www.asmusa.org/mtgsrc/generalmeeting.htm. print.
Meeting Info.: 101st General Meeting of the American Society for Microbiology Orlando, FL, USA May 20-24, 2001
ISSN: 1060-2011.

DT Conference

LA English

L9 ANSWER 6 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB Intra-abdominal infections (IAI) continue to be a serious clinical problem. Bacterial synergism is an important factor that influences the shift from contamination to IAI, leading to the development of lesions and abscess formation. Escherichia coli and Bacteroides fragilis are particularly abundant in IAI. The underlying molecular mechanisms of this pathogenic synergy are still unclear. The role of the hemoglobin protease (Hbp) **autotransporter** protein from E. coli in the synergy of IAI was investigated. Hbp is identical to Tsh, a temperature-sensitive hemagglutinin associated with avian pathogenic E. coli. Clinical isolates from miscellaneous extraintestinal infections were phenotypically and genotypically screened for Hbp. The presence of Hbp was significantly associated with E. coli isolated from IAI and other extraintestinal infections. In a murine infection model, Hbp was shown to contribute to the pathogenic synergy of abscess development. Mice immunized with Hbp were protected against mixed infections and did not develop abscess lesions. Furthermore, an E. coli wild-type strain that did not induce abscess formation in the synergy model was transformed with a **plasmid** encoding the hbp gene, and mixed infections with this strain lead to increased growth of B. fragilis and induction of abscess lesions. Growth-promoting studies showed that purified Hbp is able to deliver heme to B. fragilis strain BE1. In conclusion, results suggest the synergy of abscess formation by E. coli and B. fragilis can be partly explained by the capacity of B. fragilis to intercept Hbp and iron from heme to overcome the iron restrictions imposed by the host.

AN 2002:144755 BIOSIS

DN PREV200200144755

TI Escherichia coli hemoglobin protease **autotransporter** contributes to synergistic abscess formation and heme-dependent growth of Bacteroides fragilis.

AU Otto, Ben R. (1); van Dooren, Silvy J. M.; Dozois, Charles M.; Luirink, Joen; Oudega, Bauke

CS (1) Department of Molecular Microbiology, Institute of Molecular Biological Sciences, De Boelelaan 1087, 1081 HV, Amsterdam: brotto@bio.vu.nl Netherlands

SO Infection and Immunity, (January, 2002) Vol. 70, No. 1, pp. 5-10. print.
ISSN: 0019-9567.

DT Article

LA English

L9 ANSWER 7 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Helicobacter pylori produces a number of proteins associated with the outer membrane, including adhesins and the vacuolating cytotoxin. These proteins are supposed to integrate into the outer membrane by beta-barrel structures, characteristic of the family of **autotransporter** proteins. By using the SOMPES (shuttle **vector**-based outer membrane protein expression) system for outer membrane protein production, we were able to functionally express in H. pylori the cholera toxin B subunit genetically fused to the C-terminal VacA domain. We demonstrate that the fusion protein is translocated to the H. pylori outer membrane and that the CtxB domain is exposed on the H. pylori surface. Thus, we provide the first experimental evidence that the C-terminal beta-domain of VacA can transport a foreign passenger protein to the H. pylori surface and hence acts as a functional **autotransporter**.
AN 2001:538700 BIOSIS
DN PREV200100538700
TI Outer membrane targeting of passenger proteins by the vacuolating cytotoxin **autotransporter** of Helicobacter pylori.
AU Fischer, Wolfgang (1); Buhrdorf, Renate; Gerland, Elke; Haas, Rainer
CS (1) Max von Pettenkofer-Institut fuer Hygiene und Medizinische Mikrobiologie, Pettenkoferstr. 9a, D-80336, Munich: schmitt@m3401.mpk.med.uni-muenchen.de Germany
SO Infection and Immunity, (November, 2001) Vol. 69, No. 11, pp. 6769-6775. print.
ISSN: 0019-9567.
DT Article
LA English
SL English

L9 ANSWER 8 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:354125 BIOSIS
DN PREV200100354125
TI The serine protease **autotransporters** of Enterobacteriaceae (SPATEs) comprise a family of functionally unique proteins.
AU Dutta, Pinaki R. (1); Cappello, Renato; Nataro, James P.
CS (1) Center for Vaccine Development, University of Maryland, Baltimore, MD USA
SO Pediatric Research, (April, 2001) Vol. 49, No. 4 Part 2, pp. 246A. print.
Meeting Info.: Annual Meeting of the Pediatric Academic Societies Baltimore, Maryland, USA April 28-May 01, 2001
ISSN: 0031-3998.
DT Conference
LA English
SL English

L9 ANSWER 9 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB The diffuse adherence of Escherichia coli strain 2787 (O126:H27) is mediated by the **autotransporter** adhesin AIDA-I (adhesin-involved-in-diffuse-adherence) encoded by the **plasmid** -borne aidA gene. AIDA-I exhibits an aberrant mobility in denaturing gel electrophoresis. Deletion of the open reading frame (ORF) A immediately upstream of aidA restores the predicted mobility of AIDA-I, but the adhesin is no longer functional. This indicates that the mature AIDA-I adhesin is post-translationally modified and the modification is essential for adherence function. Labelling with digoxigenin hydrazide shows AIDA-I to be glycosylated. Using carbohydrate composition analysis, AIDA-I contains exclusively heptose residues (ratio heptose:AIDA-I apprxeq19:1). The deduced amino acid sequence of the cytoplasmic open reading frame (ORF) A gene product shows homologies to heptosyltransferases. In addition, the modification was completely abolished in an ADP-glycero-manno-heptopyranose mutant. Our results provide direct evidence for glycosylation of the AIDA-I adhesin by heptoses with the ORF A gene product as a specific (mono)heptosyltransferase generating the functional mature AIDA-I adhesin. Consequently, the ORF A gene has been

denoted 'aah' (**autotransporter**-adhesin-heptosyltransferase). Glycosylation by heptoses represents a novel protein modification in eubacteria.
AN 2001:344903 BIOSIS
DN PREV200100344903
TI Glycosylation with heptose residues mediated by the aah gene product is essential for adherence of the AIDA-I adhesin.
AU Benz, Inga; Schmidt, M. Alexander (1)
CS (1) Zentrum fuer Molekularbiologie der Entzuendung (ZMBE), Institut fuer Infektiologie, Universitaetsklinikum Muenster, Muenster: infekt@uni-muenster.de Germany
SO Molecular Microbiology, (June, 2001) Vol. 40, No. 6, pp. 1403-1413. print. ISSN: 0950-382X.
DT Article
LA English
SL English

L9 ANSWER 10 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:212800 BIOSIS
DN PREV200100212800
TI Effect of enteroaggregative Escherichia coli **plasmid**-encoded toxin (Pet) on human intestine.
AU Hicks, S. (1); Henderson, J. R.; Navarro-Garcia, F.; Nataro, J. P.; Phillips, A. D. (1)
CS (1) University Dept of Paediatric Gastroenterology, Royal Free Hospital, London UK
SO JPGN, (May, 1999) Vol. 28, No. 5, pp. 557. print.
Meeting Info.: 32nd Annual Meeting of the European Society of Pediatric Gastroenterology, Hepatology and Nutrition Warsaw, Poland June 02-05, 1999
DT Conference
LA English
SL English

L9 ANSWER 11 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB In this study we report the complete nucleotide sequence and genetic organization of the she pathogenicity island (PAI) of Shigella flexneri 2a strain YSH6000T: The 46 603 bp she PAI is situated adjacent to the 3' terminus of the pheV tRNA gene and includes an imperfect direct repeat of the 3'-terminal 22 bp of the pheV gene at the right boundary of the PAI. The she PAI carries a bacteriophage P4-like integrase gene within the pheV-proximal boundary of the PAI, intact and truncated mobile genetic elements, **plasmid**-related sequences, open reading frames exhibiting high sequence similarity to those found on the locus of enterocyte effacement (LEE) PAI of enterohemorrhagic Escherichia coli (EHEC), and the SHI-2 PAI of S. flexneri and several other open reading frames of unknown function. The she PAI also encodes two **autotransporter** proteins, including SigA, a cytopathic protease that contributes to intestinal fluid accumulation and Pic, a protease with mucinase, and hemagglutinin activities. In addition, an open reading frame (orf) termed sap, has high sequence similarity to the gene encoding Antigen 43, a surface-located **autotransporter** protein of E. coli. The ShET1 enterotoxin genes, associated predominantly with S. flexneri 2a strains, are also located on the she PAI.
AN 2001:198634 BIOSIS
DN PREV200100198634
TI Genetic organization of the she pathogenicity island in Shigella flexneri 2a.
AU Al-Hasani, Keith; Rajakumar, Kumar (1); Bulach, Dieter; Robins-Browne, Roy; Adler, Ben; Sakellaris, Harry
CS (1) Department of Microbiology and Infectious Diseases, Royal Children's Hospital, Parkville, Victoria, 3052: Kumar.Rajakumar@med.monash.edu.au Australia
SO Microbial Pathogenesis, (January, 2001) Vol. 30, No. 1, pp. 1-8. print. ISSN: 0882-4010.

DT Article
LA English
SL English

L9 ANSWER 12 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB We have previously described a 104-kDa protein termed Pet (for **plasmid**-encoded toxin) secreted by some strains of enteroaggregative Escherichia coli (EAEC). Through an unknown mechanism, this toxin (i) raises transepithelial short-circuit current (Isc) and decreases the electrical resistance of rat jejunum mounted in the Ussing chamber, (ii) causes cytoskeletal alterations in HEp-2 cells and HT29/C1 cells, and (iii) is required for histopathologic effects of EAEC on human intestinal mucosa. Pet is a member of the **autotransporter** class of secreted proteins and together with Tsh, EspP, EspC, ShMu, and SepA proteins comprises the SPATE subfamily. Here, we show that Pet is internalized by HEp-2 cells and that internalization appears to be required for the induction of cytopathic effects. Evidence supporting Pet internalization includes the facts that (i) the effects of Pet on epithelial cells were inhibited by brefeldin A, which interferes with various steps of intracellular vesicular transport; (ii) immunoblots using anti-Pet antibodies detected Pet in the cytoplasmic fraction of intoxicated HEp-2 cells; (iii) Pet was detected inside HEp-2 cells by confocal microscopy; and (iv) a mutant in the passenger domain cleavage site, which prevents Pet release from the bacterial outer membrane, did not produce cytopathic effects on epithelial cells, whereas the release of mutant Pet from the outer membrane with trypsin yielded active toxin. We have also shown that the Pet serine protease motif is required to produce cytopathic effects but not for Pet secretion. Our results suggest an intracellular mode of action for the Pet protease and are consistent with we our recent report suggesting an intracellular mode of action for Pet (J. M. Villaseca, F. Navarro-Garcia, G. Mendoza-Hernandez, J. P. Nataro, A. Cravioto, and C. Eslava, Infect. Immun. 68:5920-5927, 2000).
AN 2001:142888 BIOSIS
DN PREV200100142888
TI **Plasmid**-encoded toxin of enteroaggregative Escherichia coli is internalized by epithelial cells.
AU Navarro-Garcia, Fernando (1); Canizalez-Roman, Adrian; Luna, Jose; Sears, Cynthia; Nataro, James P.
CS (1) Department of Cell Biology, CINVESTAV-IPN, 07000, Mexico, DF: fnavarro@cell.cinvestav.mx Mexico
SO Infection and Immunity, (February, 2001) Vol. 69, No. 2, pp. 1053-1060. print.
ISSN: 0019-9567.
DT Article
LA English
SL English

L9 ANSWER 13 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Pathogenic Escherichia coli strains are known to cause edema disease (ED) and postweaning diarrhea (PWD) in piglets. Although the exact mechanisms of pathogenicity that lead to ED-PWD remain to be elucidated, E. coli-borne Shiga-like toxin and adhesion-mediating virulence factors such as F18 adhesin or F4 fimbriae are believed to play a central role in ED-PWD. In light of these observations we investigated whether another E. coli adhesin, the **plasmid**-encoded AIDA (adhesin involved in diffuse adherence) might also be present in ED-PWD-causing E. coli isolates. For rapid screening for the AIDA system in large numbers of isolates, a multiplex PCR method along with a duplex Western blot procedure was developed. When screening 104 strains obtained from pigs with or without ED-PWD, we observed a high prevalence of the AIDA operon in porcine E. coli isolates, with over 25% of all strains being AIDA positive, and we could demonstrate a significant association of the intact AIDA gene (orfB) with ED-PWD, while defects in orfB were associated with the absence of disease. Although our data hint toward a contribution of

AIDA to ED-PWD, further studies will be necessary since the presence of the AIDA genes was also associated with the presence of the Shiga-like toxin and F18 adhesin genes, two reported virulence factors for ED-PWD.

AN 2001:94997 BIOSIS
DN PREV200100094997
TI The AIDA **autotransporter** system is associated with F18 and Stx2e in Escherichia coli isolates from pigs diagnosed with edema disease and postweaning diarrhea.
AU Niewerth, Ulla; Frey, Andreas; Voss, Thomas; Le Bouguenec, Chantal; Baljer, Georg; Franke, Sylvia; Schmidt, M. Alexander (1)
CS (1) Institut fuer Infektiologie, ZMBE, Von-Esmarch-Str. 56, D-48149, Muenster: infekt@uni-muenster.de Germany
SO Clinical and Diagnostic Laboratory Immunology, (January, 2001) Vol. 8, No. 1, pp. 143-149. print.
ISSN: 1071-412X.
DT Article
LA English
SL English

L9 ANSWER 14 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB At least five proteins are secreted extracellularly by enteropathogenic Escherichia coli (EPEC), a leading cause of infant diarrhea in developing countries. However only one, EspC, is known to be secreted independently of the type HI secretion apparatus encoded by genes located within the 35.6-kb locus of enterocyte effacement pathogenicity island. EspC is a member of the **autotransporter** family of proteins, and the secreted portion of the molecule is 110 kDa. Here we determine that the espC gene is located within a second EPEC pathogenicity island at 60 min on the chromosome of E. coli. We also show that EspC is an enterotoxin, indicated by rises in short-circuit current and potential difference in rat jejunal tissue mounted in Ussing chambers. In addition, preincubation with antiserum against the homologous Pet enterotoxin of enteroaggregative E. coli eliminated EspC enterotoxin activity. Like the EAF **plasmid** , the espC pathogenicity island was found only in a subset of EPEC, suggesting that EspC may play a role as an accessory virulence factor in some but not all EPEC strains.
AN 2001:72745 BIOSIS
DN PREV200100072745
TI espC pathogenicity island of enteropathogenic Escherichia coli encodes an enterotoxin.
AU Mellies, Jay L.; Navarro-Garcia, Fernando; Okeke, Iruka; Frederickson, Julie; Nataro, James P.; Kaper, James B. (1)
CS (1) Center for Vaccine Development, University of Maryland School of Medicine, 685 W. Baltimore St., Baltimore, MD, 21201: jkaper@umaryland.edu USA
SO Infection and Immunity, (January, 2001) Vol. 69, No. 1, pp. 315-324. print.
ISSN: 0019-9567.
DT Article
LA English
SL English

L9 ANSWER 15 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB An in silico scan of the partially completed genome sequence of Bordetella pertussis and analyses of transcriptional fusions generated with a new integrational **vector** were used to identify new potential virulence genes. The genes encoding a putative siderophore receptor, adhesins, and an **autotransporter** protein appeared to be regulated in a manner similar to Bordetella virulence genes by the global virulence regulator BvgAS. In contrast, the gene encoding a putative intimin-like protein appeared to be repressed under conditions of virulence.
AN 2000:478682 BIOSIS
DN PREV200000478682

TI New virulence-activated and virulence-repressed genes identified by systematic gene inactivation and generation of transcriptional fusions in Bordetella pertussis.
AU Antoine, Rudy; Alonso, Sylvie; Raze, Dominique; Coutte, Loic; Lesjean, Sarah; Willery, Eve; Locht, Camille; Jacob-Dubuisson, Francoise (1)
CS (1) INSERM U447, Institut de Biologie de Lille, Institut Pasteur de Lille, 1 Rue Calmette, 59019, Lille Cedex France
SO Journal of Bacteriology, (October, 2000) Vol. 182, No. 20, pp. 5902-5905. print.
ISSN: 0021-9193.
DT Article
LA English
SL English

L9 ANSWER 16 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB The temperature-sensitive hemagglutinin Tsh is a member of the **autotransporter** group of proteins and was first identified in avian-pathogenic Escherichia coli (APEC) strain chi7122. The prevalence of tsh was investigated in 300 E. coli isolates of avian origin and characterized for virulence in a 1-day-old chick lethality test. Results indicate that among the tsh-positive APEC isolates, 90.6% belonged to the highest virulence class. Experimental inoculation of chickens with chi7122 and an isogenic tsh mutant demonstrated that Tsh may contribute to the development of lesions within the air sacs of birds but is not required for subsequent generalized infection manifesting as perihepatitis, pericarditis, and septicemia. Conjugation and hybridization experiments revealed that the tsh gene is located on a ColV-type **plasmid** in many of the APEC strains studied, including strain chi7122, near the colicin V genes in most of these strains. DNA sequences flanking the tsh gene of strain chi7122 include complete and partial insertion sequences and phage-related DNA sequences, some of which were also found on virulence **plasmids** and pathogenicity islands present in various E. coli pathotypes and other pathogenic members of the Enterobacteriaceae. These results demonstrate that the tsh gene is frequently located on the ColV virulence **plasmid** in APEC and suggest a possible role of Tsh in the pathogenicity of E. coli for chickens in the early stages of infection.
AN 2000:349499 BIOSIS
DN PREV200000349499
TI Relationship between the Tsh **autotransporter** and pathogenicity of avian Escherichia coli and localization and analysis of the tsh genetic region.
AU Dozois, Charles M.; Dho-Moulin, Maryvonne (1); Bree, Annie; Fairbrother, John M.; Desautels, Clarisse; Curtiss, Roy, III
CS (1) Station de Pathologie Aviaire et de Parasitologie, Institut National de la Recherche Agronomique, Centre de Recherches de Tours-Nouzilly, 37380, Nouzilly France
SO Infection and Immunity, (July, 2000) Vol. 68, No. 7, pp. 4145-4154. print.
ISSN: 0019-9567.
DT Article
LA English
SL English

L9 ANSWER 17 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB For the efficient surface presentation and release of virulence factors especially pathogenic **Gram-negative** bacteria have developed several distinct secretion mechanisms. An increasing number of pathogens in various species employs a mechanism denoted the '**autotransporter**' pathway. This pathway is characterised by an outer membrane translocator module representing the C-terminal domain of the transported protein itself. An intriguing potential application of such systems involves the transport and surface expression of recombinant proteins or peptides, like e.g. the presentation of antigens for the generation of live oral **vectors** as vaccine carriers. Here we

report on the incorporation of heterologous (poly-) peptides in permissive sites of the translocator module of the adhesin-involved-in-diffuse-adherence (AIDA) **autotransporter** system. We demonstrate the presentation of the B subunit of the heat labile enterotoxin of Escherichia coli (LTB) as well as of functional T-cell epitopes of Yersinia enterocolitica heat-shock protein 60 (Y-hsp60) on the surface of E. coli.
AN 2000:267077 BIOSIS
DN PREV200000267077
TI Cell surface presentation of recombinant (poly-) peptides including functional T-cell epitopes by the AIDA **autotransporter** system.
AU Konieczny, Marc P.J.; Suhr, Martin; Noll, Annette; Autenrieth, Ingo B.; Schmidt, M. Alexander (1)
CS (1) Institut fuer Infektiologie-Zentrum fuer Molekularbiologie der Entzuendung (ZMBE), Westfaelische Wilhelms, Universitaet Muenster, Von-Esmarch-Str. 56, 48149, Muenster Germany
SO FEMS Immunology and Medical Microbiology, (April, 2000) Vol. 27, No. 4, pp. 321-332. print..
ISSN: 0928-8244.
DT Article
LA English
SL English

L9 ANSWER 18 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Certain Escherichia coli strains bind the Fc fragment of immunoglobulin G (IgG) at the bacterial cell surface. Previous work established that this nonimmune Ig binding depends on several large proteins with apparent molecular masses that can exceed 200 kDa. For E. coli strain ECOR-9, four distinct genes (designated eibA, eibC, eibD, and eibE) are responsible for Ig binding. Two eib genes are linked to eaa genes, which are homologous to genes for the **autotransporter** family of secreted proteins. With reference to the E. coli K-12 chromosome, the eibA-eaaA cluster is adjacent to trpA (min 28.3) while the eibC-eaaC cluster is adjacent to aspS (min 42.0). Sequence adjacent to the eibA-eaaA converges with that of strain K-12 precisely as observed for the Atlas family of prophages, suggesting that eibA is part of one of these. All four eib genes, when cloned into **plasmid vectors**, impart IgG binding to E. coli K-12 strains, and three impart IgA binding also. The IgG binding occurs at the bacterial cell surface, and its expression increases survival in serum by up to 3 orders of magnitude. The eib sequences predict a C-terminal peptide motif that is characteristic of outer membrane proteins, and the protein sequences show significant similarity near the C terminus to both the YadA virulence factor of Yersinia species and the universal surface protein A II of Moraxella catarrhalis. The sizes predicted for Eib proteins from DNA sequence are much smaller than their apparent sizes on sodium dodecyl sulfatepolyacrylamide gel electrophoresis, possible reflecting stable oligomerization.
AN 2000:180703 BIOSIS
DN PREV200000180703
TI Four different genes responsible for nonimmune immunoglobulin-binding activities within a single strain of Escherichia coli.
AU Sandt, Carol H. (1); Hill, Charles W.
CS (1) Department of Biochemistry and Molecular Biology, Pennsylvania State College of Medicine, Mail Services H171, Hershey, PA, 17033-0850 USA
SO Infection and Immunity, (April, 2000) Vol. 68, No. 4, pp. 2205-2214.
ISSN: 0019-9567.
DT Article
LA English
SL English

L9 ANSWER 19 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Enteroaggregative Escherichia coli (EAEC) strains have been shown to adhere to human intestinal tissue in an in vitro organ culture (IVOC) model, and certain strains manifest mucosal toxicity. We have recently

described the EAEC **plasmid**-encoded toxin (Pet), a member of a specific serine protease subclass of the **autotransporter** proteins. When injected into rat ileal loops, Pet both elicited fluid accumulation and had cytotoxic effects on the mucosa. Furthermore, the Pet protein caused rises in short circuit current from rat jejunal tissue mounted in a Ussing chamber and rounding of intestinal epithelial cells in culture. We therefore hypothesized that the mucosal pathology induced by EAEC strains in the IVOC model was related to expression of the Pet protein. Here, we have examined the effects of EAEC strain 042 and its isogenic pet mutant in the IVOC model. 042-infected colonic explants exhibited dilation of crypt openings, increased cell rounding, development of prominent intercryptcrevices, and absence of apical mucus plugs. Colonic tissue incubated with the pet mutant exhibited significantly fewer mucosal abnormalities both subjectively and as quantitated morphometrically by measurement of crypt aperture diameter. Mucosal effects were restored upon complementation of the pet mutation in trans. Interestingly, we found that the ability of 042 to damage T84 cells was not dependent upon Pet. The data suggest that the Pet toxin is active on the human intestinal mucosa but that EAEC may have other mechanisms of eliciting mucosal damage.

AN 1999:486459 BIOSIS

DN PREV199900486459

TI Involvement of the enteroaggregative Escherichia coli **plasmid** -encoded toxin in causing human intestinal damage.

AU Henderson, Ian R.; Hicks, Susan; Navarro-Garcia, Fernando; Elias, Waldir P.; Philips, Alan D.; Nataro, James P. (1)

CS (1) Center for Vaccine Development, Department of Pediatrics, University of Maryland School of Medicine, Baltimore, MD, 21201 USA

SO Infection and Immunity, (Oct., 1999) Vol. 67, No. 10, pp. 5338-5344. ISSN: 0019-9567.

DT Article

LA English

SL English

L9 ANSWER 20 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

AB We have previously described enteroaggregative Escherichia coli (EAEC) strains that induce cytotoxic effects on T84 cells, ligated rat ileal loops, and human intestine in culture. Such strains secrete a 104-kDa protein termed Pet (for **plasmid**-encoded toxin). We have also shown previously that the Pet toxin induces rises in short-circuit current and decreases the electrical resistance in rat jejunum mounted in an Ussing chamber. The nucleotide sequence of the pet gene revealed that Pet is a member of the **autotransporter** class of secreted proteins. Here we show that a concentrated supernatant of E. coli HB101 harboring the minimal pet clone pCEFN1 induces temperature-, time- and dose-dependent cytopathic effects on HEp-2 cells and HT29 C1 cells in culture. The effects were characterized by release of the cellular focal contacts from the glass substratum, followed by complete rounding of the cells and detachment from the glass. Staining of the Pet-treated cells with Live/Dead viability stain revealed that >90% of rounded cells were viable. Pet-intoxicated HEp-2 and HT29 cells stained with fluorescein-labeled phalloidin revealed contraction of the cytoskeleton and loss of actin stress fibers. However, the effects of Pet were not inhibited by cytoskeleton-altering drugs, including colchicine, taxol, cytochalasin D, and phallicidin. The Pet protein induced proteolysis in zymogram gels, and preincubation with the serine protease inhibitor phenylmethylsulfonyl fluoride resulted in complete abrogation of Pet cytopathic effects. We introduced a mutation in a predicted catalytic serine residue and found that the mutant (Pet S260I) was deficient in protease activity and did not produce cytopathic effects, cytoskeletal damage, or enterotoxic effects in Ussing chambers. These data suggest that Pet is a cytoskeleton-altering toxin and that its protease activity is involved in each or the observed phenotypes.

AN 1999:271740 BIOSIS

DN PREV199900271740
TI Cytoskeletal effects induced by Pet, the serine protease enterotoxin of enteroaggregative Escherichia coli.
AU Navarro-Garcia, Fernando (1); Sears, Cynthia; Eslava, Carlos; Cravioto, Alejandro; Nataro, James P.
CS (1) Department of Public Health, Faculty of Medicine, UNAM, 04510, Mexico, DF Mexico
SO Infection and Immunity, (May, 1999) Vol. 67, No. 5, pp. 2184-2192. ISSN: 0019-9567.
DT Article
LA English
SL English

L9 ANSWER 21 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:415736 BIOSIS
DN PREV199800415736
TI The effect of the **plasmid** encoded toxin of enteroaggregative Escherichia coli in in vitro organ culture.
AU Henderson, Ian R. (1); Navarro-Garcia, Fernando (1); Hicks, Susan; Philips, Alan D.; Nataro, James P. (1)
CS (1) Ctr. Vaccine Development, Dep. Pediatr., Univ. Maryland Sch. Med., Baltimore, MD USA
SO Abstracts of the General Meeting of the American Society for Microbiology, (1998) Vol. 98, pp. 82-83.
Meeting Info.: 98th General Meeting of the American Society for Microbiology Atlanta, Georgia, USA May 17-21, 1998 American Society for Microbiology
. ISSN: 1060-2011.
DT Conference
LA English

L9 ANSWER 22 OF 23 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AB Enteroaggregative Escherichia coli (EAEC) is an emerging cause of diarrheal illness. Clinical data suggest that diarrhea caused by EAEC is predominantly secretory in nature, but the responsible enterotoxin has not been described. Work from our laboratories has implicated a ca. 108-kDa protein as a heat-labile enterotoxin and cytotoxin, as evidenced by rises in short-circuit current and falls in tissue resistance in rat jejunal tissue mounted in an Ussing chamber. Here we report the genetic cloning, sequencing, and characterization of this high-molecular-weight heat-labile toxin. The toxin (designated the **plasmid**-encoded toxin (Pet)) is encoded on the 65-MDa adherence-related **plasmid** of EAEC strain 042. Nucleotide sequence analysis suggests that the toxin is a member of the **autotransporter** class of proteins, characterized by the presence of a conserved C-terminal domain which forms a beta-barrel pore in the bacterial outer membrane and through which the mature protein is transported. The Pet toxin is highly homologous to the EspP protease of enterohemorrhagic E. coli and to EspC of enteropathogenic E. coli, an as yet cryptic protein. In addition to its potential role in EAEC infection, Pet represents the first enterotoxin within the **autotransporter** class of secreted proteins. We hypothesize that other closely related members of this class may also produce enterotoxic effects.
AN 1998:348484 BIOSIS
DN PREV199800348484
TI Pet, and **autotransporter** enterotoxin from enteroaggregative Escherichia coli.
AU Eslava, Carlos (1); Navarro-Garcia, Fernando; Czeczulin, John R.; Henderson, Ian R.; Cravioto, Alejandro; Nataro, James P.
CS (1) Dep. Public Health, Fac. Med., UNAM, Ap. Postal 70-443, 04510 Mexico DF Mexico
SO Infection and Immunity, (July, 1998) Vol. 66, No. 7, pp. 3155-3163. ISSN: 0019-9567.
DT Article
LA English

L9 ANSWER 23 OF 23 USPATFULL

AB The invention provides a novel surface polypeptide from Neisseria meningitidis as well as nucleic acid and nucleic acid sequence homologues encoding this protein. Pharmaceutical compositions containing the polypeptide and nucleic acids of the invention are also disclosed as well as methods useful in the treatment, prevention and diagnosis of N. meningitidis infection.

AN 2001:32810 USPATFULL

TI Surface antigen

IN Peak, Ian Richard Anselm, St. Lucia, Australia
Jennings, Michael Paul, Carina, Australia
Moxon, E. Richard, Oxfordshire, United Kingdom

PA The University of Queensland, Queensland, Australia (non-U.S. corporation)

PI US 6197312 B1 20010306

AI US 1999-377155 19990819 (9)

RLI Continuation of Ser. No. WO 1998-AU1031, filed on 14 Dec 1998

DT Utility

FS Granted

EXNAM Primary Examiner: Graser, Jennifer

LREP Foley & Lardner

CLMN Number of Claims: 26

ECL Exemplary Claim: 1

L6 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1995:79678 BIOSIS
DOCUMENT NUMBER: PREV199598093978
TITLE: Synthesis and secretion of bacterial antigens by attenuated Salmonella via the **Escherichia coli** hemolysin secretion system.
AUTHOR(S): Gentschev, I.; Mollenkopf, H.-J.; Sokolovic, Z.; Ludwig, A.; Tengel, C.; Gross, R.; Hess, J.; Demuth, A.; Goebel, W. (1)
CORPORATE SOURCE: (1) Lehrstuhl Mikrobiologie, Theodor-Boveri-Inst. Biowissenschaften, Am Hubland, D-97074 Wuerzburg Germany
SOURCE: Behring Institute Mitteilungen, (1994) Vol. 0, No. 95, pp. 57-66.
ISSN: 0301-0457.
DOCUMENT TYPE: Article
LANGUAGE: English

> d ibib 1-6 19

L9 ANSWER 1 OF 6 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:305940 BIOSIS
DOCUMENT NUMBER: PREV200000305940
TITLE: Autodisplay: Functional display of active beta-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter.
AUTHOR(S): Lattemann, Claus T.; Maurer, Jochen; Gerland, Elke; Meyer, Thomas F.
SOURCE: Journal of Bacteriology, (July, 2000) Vol. 182, No. 13, pp. 3726-3733. print.
ISSN: 0021-9193.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L9 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:446280 CAPLUS
DOCUMENT NUMBER: 133:330143
TITLE: Autodisplay: functional display of active .beta.-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter
AUTHOR(S): Lattemann, Claus T.; Maurer, Jochen; Gerland, Elke; Meyer, Thomas F.
CORPORATE SOURCE: Abteilung Infektionsbiologie, Max-Planck-Institut fur Biologie, Tubingen, D-72076, Germany
SOURCE: J. Bacteriol. (2000), 182(13), 3726-3733
CODEN: JOBAAY; ISSN: 0021-9193
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 39
REFERENCE(S): (1) Bardwell, J; Cell 1991, V67, P581 CAPLUS
(2) Benz, I; Mol Microbiol 1992, V6, P1539 CAPLUS
(3) Cesareni, G; FEBS Lett 1992, V307, P66 CAPLUS
(4) Chervaux, C; Mol Gen Genet 1995, V249, P237 CAPLUS
(5) Collazo, C; Mol Microbiol 1997, V24, P747 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 6 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000222793 EMBASE
TITLE: Autodisplay: Functional display of active .beta.-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter.
AUTHOR: Lattemann C.T.; Maurer J.; Gerland E.; Meyer T.F.
CORPORATE SOURCE: T.F. Meyer, Max-Planck-Inst. Infektionsbiologie, Monbijoustr. 2, D-10117 Berlin, Germany.
meyer@mpiib-berlin.mpg.de
SOURCE: Journal of Bacteriology, (2000) 182/13 (3726-3733).
Refs: 39
ISSN: 0021-9193 CODEN: JOBAAY
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

L9 ANSWER 4 OF 6 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 2000:112388 LIFESCI
TITLE: Autodisplay: Functional Display of Active beta -Lactamase on the Surface of Escherichia coli by the **AIDA**-I Autotransporter
AUTHOR: Lattemann, C.T.; Maurer, J.; Gerland, E.; Meyer, T.F. *

CORPORATE SOURCE: Max-Planck-Institut fuer Infektionsbiologie, Monbijoustr. 2, D-10117 Berlin, Germany; E-mail: meyer@mpiib-berlin.mpg.de
SOURCE: Journal of Bacteriology [J. Bacteriol.], (20000700) vol. 182, no. 13, pp. 3726-3733.
ISSN: 0021-9193.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L9 ANSWER 5 OF 6 MEDLINE
ACCESSION NUMBER: 2000396365 MEDLINE
DOCUMENT NUMBER: 20309702 PubMed ID: 10850987
TITLE: Autodisplay: functional display of active beta-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter.
AUTHOR: Lattemann C T; Maurer J; Gerland E; Meyer T F
CORPORATE SOURCE: Abteilung Infektionsbiologie, Max-Planck-Institut fur Biologie, D-72076 Tubingen, Germany.
SOURCE: JOURNAL OF BACTERIOLOGY, (2000 Jul) 182 (13) 3726-33.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000824
Last Updated on STN: 20000824
Entered Medline: 20000815

L9 ANSWER 6 OF 6 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 2000:457563 SCISEARCH
THE GENUINE ARTICLE: 324BX
TITLE: Autodisplay: Functional display of active beta-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter
AUTHOR: Lattemann C T; Maurer J; Gerland E; Meyer T F (Reprint)
CORPORATE SOURCE: MAX PLANCK INST INFEKT BIOL, MOL BIOL ABT, MONBIJOUSTR 2, D-10117 BERLIN, GERMANY (Reprint); MAX PLANCK INST INFEKT BIOL, MOL BIOL ABT, D-10117 BERLIN, GERMANY; MAX PLANCK INST BIOL, INFEKT BIOL ABT, D-72076 TUBINGEN, GERMANY; CREATOGEN GMBH, D-86156 AUGSBURG, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: JOURNAL OF BACTERIOLOGY, (JUL 2000) Vol. 182, No. 13, pp. 3726-3733.
Publisher: AMER SOC MICROBIOLOGY, 1752 N ST NW, WASHINGTON, DC 20036-2904.
ISSN: 0021-9193.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 39
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

=>

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L7          1482 S AIDA
L8            74 S L7 AND (OUTER MEMBRANE)
L9             6 S L8 AND AUTOTRANSPORTERS

=>
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L8 ANSWER 1 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:377322 BIOSIS
DOCUMENT NUMBER: PREV200000377322
TITLE: Identification and characterisation of a novel conserved **outer membrane** protein from Neisseria meningitidis.
AUTHOR(S): Peak, Ian R. A.; Srikhanta, Yogitha; Dieckelmann, Manuela; Moxon, E. Richard; Jennings, Michael P. (1)
CORPORATE SOURCE: (1) Department of Microbiology and Parasitology, University of Queensland, Brisbane, QLD, 4072 Australia
SOURCE: FEMS Immunology and Medical Microbiology, (August, 2000) Vol. 28, No. 4, pp. 329-334. print.
ISSN: 0928-8244.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 2 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:305940 BIOSIS
DOCUMENT NUMBER: PREV200000305940
TITLE: Autodisplay: Functional display of active beta-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter.
AUTHOR(S): Lattemann, Claus T.; Maurer, Jochen; Gerland, Elke; Meyer, Thomas F.
SOURCE: Journal of Bacteriology, (July, 2000) Vol. 182, No. 13, pp. 3726-3733. print.
ISSN: 0021-9193.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 3 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:267077 BIOSIS
DOCUMENT NUMBER: PREV200000267077
TITLE: Cell surface presentation of recombinant (poly-) peptides including functional T-cell epitopes by the **AIDA** autotransporter system.
AUTHOR(S): Konieczny, Marc P.J.; Suhr, Martin; Noll, Annette; Autenrieth, Ingo B.; Schmidt, M. Alexander (1)
CORPORATE SOURCE: (1) Institut fuer Infektiologie-Zentrum fuer Molekularbiologie der Entzuendung (ZMBE), Westfaelische Wilhelms, Universitaet Muenster, Von-Esmarch-Str. 56, 48149, Muenster Germany
SOURCE: FEMS Immunology and Medical Microbiology, (April, 2000) Vol. 27, No. 4, pp. 321-332. print..
ISSN: 0928-8244.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 4 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 2000:70989 BIOSIS
DOCUMENT NUMBER: PREV200000070989
TITLE: Characterization of the essential transport function of the **AIDA**-I autotransporter and evidence supporting structural predictions.
AUTHOR(S): Maurer, Jochen; Jose, Joachim; Meyer, Thomas F. (1)
CORPORATE SOURCE: (1) Abteilung Molekulare Biologie, Max-Planck-Institut fuer Infektionsbiologie, Monbijoustrasse 2, D-10117, Berlin Germany
SOURCE: Journal of Bacteriology, (Nov., 1999) Vol. 181, No. 22, pp. 7014-7020.
ISSN: 0021-9193.

DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 5 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1999:379690 BIOSIS
DOCUMENT NUMBER: PREV199900379690
TITLE: Identification of a glycoprotein produced by enterotoxigenic Escherichia coli.
AUTHOR(S): Lindenthal, Christoph; Elsinghorst, Eric A. (1)
CORPORATE SOURCE: (1) Department of Molecular Biosciences, University of Kansas, 7049 Haworth Hall, Lawrence, KS, 66045-2106 USA
SOURCE: Infection and Immunity, (Aug., 1999) Vol. 67, No. 8, pp. 4084-4091.
ISSN: 0019-9567.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 6 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1999:323141 BIOSIS
DOCUMENT NUMBER: PREV199900323141
TITLE: **Outer membrane** integration and transport function of the **AIDA** autotransporter beta-domain, a heat-modifiable **outer membrane** protein.
AUTHOR(S): Konieczny, M.P.J. (1); Benz, I. (1); Schmidt, M. A. (1)
CORPORATE SOURCE: (1) Inst. for Infectiology, Ctr. of Molecular Biol. of Inflammation, Univ. of Muenster, Muenster Germany
SOURCE: Abstracts of the General Meeting of the American Society for Microbiology, (1999) Vol. 99, pp. 39.
Meeting Info.: 99th General Meeting of the American Society for Microbiology Chicago, Illinois, USA May 30-June 3, 1999 American Society for Microbiology
. ISSN: 1060-2011.
DOCUMENT TYPE: Conference
LANGUAGE: English

L8 ANSWER 7 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1999:174635 BIOSIS
DOCUMENT NUMBER: PREV199900174635
TITLE: Tetranucleotide repeats identify novel virulence determinant homologues in Neisseria meningitidis.
AUTHOR(S): Peak, Ian R. A. (1); Jennings, Michael P.; Hood, Derek W.; Moxon, E. Richard
CORPORATE SOURCE: (1) Dep. Microbiol., Univ. Queensland, Brisbane, QLD 4072 Australia
SOURCE: Microbial Pathogenesis, (Jan., 1999) Vol. 26, No. 1, pp. 13-23.
ISSN: 0882-4010.
DOCUMENT TYPE: Article
LANGUAGE: English

L8 ANSWER 8 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1997:112367 BIOSIS
DOCUMENT NUMBER: PREV199799411570
TITLE: Autodisplay: One component system for efficient surface display and release of soluble recombinant proteins from Escherichia coli.
AUTHOR(S): Maurer, Jochen; Jose, Joachim; Meyer, Thomas F. (1)
CORPORATE SOURCE: (1) Max-Planck-Inst. Biol., Abt. Infektionsbiol., Spemannstr. 34, 72076 Tuebingen Germany
SOURCE: Journal of Bacteriology, (1997) Vol. 179, No. 3, pp. 794-804.

ISSN: 0021-9193.
DOCUMENT TYPE: Article
LANGUAGE: English

L8 ANSWER 9 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1997:70932 BIOSIS
DOCUMENT NUMBER: PREV199799370135
TITLE: Phase-variable **outer membrane** proteins in Escherichia coli.
AUTHOR(S): Owen, Peter (1); Meehan, Mary; De Loughry-Doherty, Helen; Henderson, Ian
CORPORATE SOURCE: (1) Dep. Microbiol., Moyne Inst. Preventive Med., Trinity Coll. Dublin, Dublin 2 Ireland
SOURCE: FEMS Immunology and Medical Microbiology, (1996) Vol. 16, No. 2, pp. 63-76.
ISSN: 0928-8244.
DOCUMENT TYPE: General Review
LANGUAGE: English

L8 ANSWER 10 OF 74 BIOSIS COPYRIGHT 2001 BIOSIS
ACCESSION NUMBER: 1996:529547 BIOSIS
DOCUMENT NUMBER: PREV199699251903
TITLE: Processing of the **AIDA**-I precursor: Removal of **AIDA**-c and evidence for the **outer membrane** anchoring as a beta-barrel structure.
AUTHOR(S): Suhr, Martin; Benz, Inga; Schmidt, M. Alexander (1)
CORPORATE SOURCE: (1) Inst. Infektiol., Zentrum Molekularbiol. Entzuendung, Von-Esmarch-Strasse 56, D-48149 Muenster Germany
SOURCE: Molecular Microbiology, (1996) Vol. 22, No. 1, pp. 31-42.
ISSN: 0950-382X.
DOCUMENT TYPE: Article
LANGUAGE: English

L8 ANSWER 11 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:469888 CAPLUS
DOCUMENT NUMBER: 133:234834
TITLE: Identification and characterization of a novel conserved **outer membrane** protein from Neisseria meningitidis
AUTHOR(S): Peak, I. R. A.; Srikhanta, Y.; Dieckelmann, , M.; Moxon, E. R.; Jennings, M. P.
CORPORATE SOURCE: Department of Microbiology and Parasitology, The University of Queensland, Brisbane, 4072, Australia
SOURCE: FEMS Immunol. Med. Microbiol. (2000), 28(4), 329-334
CODEN: FIMIEV; ISSN: 0928-8244
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 19
REFERENCE(S):
(1) Aebi, C; Infect Immun 1997, V65, P4367 CAPLUS
(2) Barenkamp, S; Infect Immun 1992, V60, P1302 CAPLUS
(3) Barenkamp, S; Mol Microbiol 1996, V19, P1215 CAPLUS
(4) Benjelloun-Touimi, Z; Mol Microbiol 1995, V17, P123 CAPLUS
(5) Benz, I; Mol Microbiol 1992, V6, P1539 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 12 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:446280 CAPLUS
DOCUMENT NUMBER: 133:330143
TITLE: Autodisplay: functional display of active .beta.-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter

AUTHOR(S): Lattemann, Claus T.; Maurer, Jochen; Gerland, Elke; Meyer, Thomas F.
CORPORATE SOURCE: Abteilung Infektionsbiologie, Max-Planck-Institut fur Biologie, Tubingen, D-72076, Germany
SOURCE: J. Bacteriol. (2000), 182(13), 3726-3733
CODEN: JOBAAY; ISSN: 0021-9193
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 39
REFERENCE(S):
(1) Bardwell, J; Cell 1991, V67, P581 CAPLUS
(2) Benz, I; Mol Microbiol 1992, V6, P1539 CAPLUS
(3) Cesareni, G; FEBS Lett 1992, V307, P66 CAPLUS
(4) Chervaux, C; Mol Gen Genet 1995, V249, P237 CAPLUS
(5) Collazo, C; Mol Microbiol 1997, V24, P747 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 13 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 2000:189528 CAPLUS
DOCUMENT NUMBER: 133:16059
TITLE: Cell surface presentation of recombinant (poly-) peptides including functional T-cell epitopes by the **AIDA** autotransporter system
AUTHOR(S): Konieczny, M. P. J.; Suhr, M.; Noll, A.; Autenrieth, I. B.; Schmidt, M. Alexander
CORPORATE SOURCE: Institut fur Infektiologie-Zentrum fur Molekularbiologie der Entzundung (ZMBE), Westfalische Wilhelms-Universitat Munster, Munster, 48149, Germany
SOURCE: FEMS Immunol. Med. Microbiol. (2000), 27(4), 321-332
CODEN: FIMIEV; ISSN: 0928-8244
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 33
REFERENCE(S):
(1) Achtman, M; Infect Immun 1983, V39, P315 CAPLUS
(3) Benz, I; Infect Immun 1989, V57, P1506 CAPLUS
(4) Benz, I; Infect Immun 1992, V60, P13 CAPLUS
(5) Benz, I; Mol Microbiol 1992, V6, P1539 CAPLUS
(6) Blight, M; Trends Biotechnol 1994, V12, P450 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 14 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:750885 CAPLUS
DOCUMENT NUMBER: 132:60602
TITLE: Characterization of the essential transport function of the **AIDA**-I autotransporter and evidence supporting structural predictions
AUTHOR(S): Maurer, Jochen; Jose, Joachim; Meyer, Thomas F.
CORPORATE SOURCE: Abteilung Infektionsbiologie, Max-Planck-Institut fur Biologie, Tubingen, D-72076, Germany
SOURCE: J. Bacteriol. (1999), 181(22), 7014-7020
CODEN: JOBAAY; ISSN: 0021-9193
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 54
REFERENCE(S):
(1) Anderson, D; Science 1997, V278, P1140 CAPLUS
(2) Baneyx, F; Ann NY Acad Sci 1992, V665, P301 CAPLUS
(3) Baneyx, F; Appl Microbiol Biotechnol 1991, V36, P14 CAPLUS
(4) Baneyx, F; J Bacteriol 1990, V172, P491 CAPLUS
(5) Baneyx, F; J Bacteriol 1991, V173, P2696 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 15 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:486643 CAPLUS
DOCUMENT NUMBER: 131:240143
TITLE: Identification of a glycoprotein produced by enterotoxigenic Escherichia coli
AUTHOR(S): Lindenthal, Christoph; Elsinghorst, Eric A.
CORPORATE SOURCE: Department of Molecular Biosciences, University of Kansas, Lawrence, KS, 66045-2106, USA
SOURCE: Infect. Immun. (1999), 67(8), 4084-4091
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 47
REFERENCE(S): (1) Benz, I; Mol Microbiol 1992, V6, P1539 CAPLUS
(4) Boyer, H; J Mol Biol 1969, V41, P459 CAPLUS
(5) Bradford, M; Anal Biochem 1976, V72, P248 CAPLUS
(6) Brimer, C; J Bacteriol 1998, V180, P3209 CAPLUS
(8) Charles, I; Proc Natl Acad Sci USA 1989, V86, P3554 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 16 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1999:106753 CAPLUS
DOCUMENT NUMBER: 130:262977
TITLE: Tetranucleotide repeats identify novel virulence determinant homologues in Neisseria meningitidis
AUTHOR(S): Peak, Ian R. A.; Jennings, Michael P.; Hood, Derek W.; Moxon, E. Richard
CORPORATE SOURCE: Molecular Infectious Diseases Group, Institute of Molecular Medicine, Univ. Dep. Paediatrics, John Radcliffe Hosp., Oxford, OX3 9DS, UK
SOURCE: Microb. Pathog. (1999), 26(1), 13-23
CODEN: MIPAEV; ISSN: 0882-4010
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 19
REFERENCE(S): (2) Bernardini, M; Proc Natl Acad Sci USA 1989, V86, P3867 CAPLUS
(3) Gibbs, C; Nature 1989, V338, P651 CAPLUS
(4) Hood, D; Proc Natl Acad Sci USA 1996, V93, P11121 CAPLUS
(5) Jarosik, G; Infect Immun 1994, V62, P4861 CAPLUS
(6) Jennings, M; Microb Pathog 1995, V19, P391 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 17 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:640781 CAPLUS
DOCUMENT NUMBER: 127:315572
TITLE: Recombinant protein fusion products presentation on bacteria cell surface and release by proteinase
INVENTOR(S): Maurer, Jochen; Jose, Joachim; Meyer, Thomas F.
PATENT ASSIGNEE(S): Max-Planck-Gesellschaft zur Forderung der Wissenschaften E.V., Berlin, Germany; Maurer, Jochen; Jose, Joachim; Meyer, Thomas F.
SOURCE: PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9735022	A1	19970925	WO 1996-EP1130	19960315
W: AU, CA, CN, JP, KR, NZ, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2248754	AA	19970925	CA 1996-2248754	19960315
AU 9651097	A1	19971010	AU 1996-51097	19960315
AU 714389	B2	19991223		
EP 886678	A1	19981230	EP 1996-907487	19960315
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1216065	A	19990505	CN 1996-180254	19960315
JP 2000504928	T2	20000425	JP 1997-519186	19960315
PRIORITY APPLN. INFO.:			WO 1996-EP1130 A	19960315

L8 ANSWER 18 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1997:88914 CAPLUS
DOCUMENT NUMBER: 126:155032
TITLE: Autodisplay: one-component system for efficient surface display and release of soluble recombinant proteins from Escherichia coli
AUTHOR(S): Mauerer, Jochen; Jose, Joachim; Meyer, Thomas F.
CORPORATE SOURCE: Abteilung Infektionsbiologie, Max-Planck-Institut Biol., Berlin, 10117, Germany
SOURCE: J. Bacteriol. (1997), 179(3), 794-804
CODEN: JOBAAY; ISSN: 0021-9193
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English

L8 ANSWER 19 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:726933 CAPLUS
DOCUMENT NUMBER: 126:57127
TITLE: Phase-variable **outer membrane** proteins in Escherichia coli
AUTHOR(S): Owen, Peter; Meehan, Mary; de Loughry-Doherty, Helen; Henderson, Ian
CORPORATE SOURCE: Department of Microbiology, Moyne Institute of Preventive Medicine, Trinity College Dublin, Dublin, 2, Ire.
SOURCE: FEMS Immunol. Med. Microbiol. (1996), 16(2), 63-76
CODEN: FIMIEV; ISSN: 0928-8244
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

L8 ANSWER 20 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1996:629212 CAPLUS
DOCUMENT NUMBER: 125:270137
TITLE: Processing of the **AIDA**-I precursor: removal of AIDAc and evidence for the **outer membrane** anchoring as a .beta.-barrel structure
AUTHOR(S): Suhr, Martin; Benz, Inga; Schmidt, M. Alexander
CORPORATE SOURCE: Inst. Infektiologie, Zentrum Molekularbiol. Entzuendung (ZMBE), Zentrum Molekularbiol., Muenster, D-48149, Germany
SOURCE: Mol. Microbiol. (1996), 22(1), 31-42
CODEN: MOMIEE; ISSN: 0950-382X
DOCUMENT TYPE: Journal
LANGUAGE: English

L8 ANSWER 21 OF 74 CAPLUS COPYRIGHT 2001 ACS
ACCESSION NUMBER: 1995:719729 CAPLUS

DOCUMENT NUMBER: 124:22809
TITLE: Whole-genome random sequencing and assembly of Haemophilus influenzae Rd
AUTHOR(S): Fleischmann, Robert D.; Adams, Mark D.; White, Owen; Clayton, Rebecca A.; Kirkness, Ewen F.; Kerlavage, Anthony R.; Bult, Carol J.; Tomb, Jean-Francois; Dougherty, Brian A.; et al.
CORPORATE SOURCE: Inst. Genomic Res., Gaithersburg, MD, 20878, USA
SOURCE: Science (Washington, D. C.) (1995), 269(5223), 496-8, 507-12
CODEN: SCIEAS; ISSN: 0036-8075
DOCUMENT TYPE: Journal
LANGUAGE: English

L8 ANSWER 22 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2001406380 EMBASE
TITLE: Modular organization of the **AIDA** autotransporter translocator: The N-terminal .beta.(1)-domain is surface-exposed and stabilizes the transmembrane .beta.(2)-domain.
AUTHOR: Konieczny M.P.J.; Benz I.; Hollinderbaumer B.; Beinke C.; Niederweis M.; Schmidt M.A.
CORPORATE SOURCE: M.A. Schmidt, Institut fur Infektiologie, Zentrum Molekularbiol. Entzundung, Westfalische Wilhelms-Univ. Munster, Munster, Germany. infekt@uni-muenster.de
SOURCE: Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology, (2001) 80/1 (19-34).
Refs: 34
ISSN: 0003-6072 CODEN: ALJMAO
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 23 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000226393 EMBASE
TITLE: Identification and characterisation of a novel conserved **outer membrane** protein from Neisseria meningitidis.
AUTHOR: Peak I.R.A.; Srikhanta Y.; Dieckelmann M.; Moxon E.R.; Jennings M.P.
CORPORATE SOURCE: M.P. Jennings, Dept. Microbiology and Parasitology, University of Queensland, Brisbane, QLD 4072, Australia. jennings@biosci.uq.edu.au
SOURCE: FEMS Immunology and Medical Microbiology, (2000) 28/4 (329-334).
Refs: 19
ISSN: 0928-8244 CODEN: FIMIEV
PUBLISHER IDENT.: S 0928-8244(00)00174-7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 022 Human Genetics
029 Clinical Biochemistry
004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 24 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000222793 EMBASE
TITLE: Autodisplay: Functional display of active .beta.-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter.
AUTHOR: Lattemann C.T.; Maurer J.; Gerland E.; Meyer T.F.

CORPORATE SOURCE: T.F. Meyer, Max-Planck-Inst. Infektionsbiologie, Monbijoustr. 2, D-10117 Berlin, Germany. meyer@mpiib-berlin.mpg.de
SOURCE: Journal of Bacteriology, (2000) 182/13 (3726-3733). Refs: 39 ISSN: 0021-9193 CODEN: JOBAAY
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 25 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000104338 EMBASE
TITLE: Cell surface presentation of recombinant (poly-) peptides including functional T-cell epitopes by the **AIDA** autotransporter system.
AUTHOR: Konieczny M.P.J.; Suhr M.; Noll A.; Autenrieth I.B.; Schmidt M.A.
CORPORATE SOURCE: M.A. Schmidt, Institut fur Infektiologie, Zentrum f. Molekularbiol. Entzundung, Westfalische Wilhelms-Univ. Munster, Von-Esmarch-Str. 56, 48149 Munster, Germany. infekt@uni-muenster.de
SOURCE: FEMS Immunology and Medical Microbiology, (2000) 27/4 (321-332). Refs: 33 ISSN: 0928-8244 CODEN: FIMIEV
PUBLISHER IDENT.: S 0928-8244(99)00210-2
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 26 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999398812 EMBASE
TITLE: Characterization of the essential transport function of the **AIDA**-I autotransporter and evidence supporting structural predictions.
AUTHOR: Maurer J.; Jose J.; Meyer T.F.
CORPORATE SOURCE: T.F. Meyer, Max-Planck-Inst. fur Infektionsbiol., Abteilung Molekulare Biologie, Monbijoustrasse 2, D-10117 Berlin, Germany. meyer@mpiib-berlin.mpg.de
SOURCE: Journal of Bacteriology, (1999) 181/22 (7014-7020). Refs: 54 ISSN: 0021-9193 CODEN: JOBAAY
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 27 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999266499 EMBASE
TITLE: Identification of a glycoprotein produced by enterotoxigenic Escherichia coli.
AUTHOR: Lindenthal C.; Elsinghorst E.A.
CORPORATE SOURCE: E.A. Elsinghorst, University of Kansas, Department of Molecular Biosciences, 7049 Haworth Hall, Lawrence, KS 66045-2106, United States. elsingh@ukans.edu
SOURCE: Infection and Immunity, (1999) 67/8 (4084-4091). Refs: 47

ISSN: 0019-9567 CODEN: INFIBR
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 28 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999065696 EMBASE
TITLE: Tetranucleotide repeats identify novel virulence determinant homologues in Neisseria meningitidis.
AUTHOR: Peak I.R.A.; Jennings M.P.; Hood D.W.; Moxon E.R.
CORPORATE SOURCE: I.R.A. Peak, Department of Microbiology, The University of Queensland, Brisbane, QLD 4072, Australia. peak@biosci.uq.edu.au
SOURCE: Microbial Pathogenesis, (1999) 26/1 (13-23).
Refs: 20
ISSN: 0882-4010 CODEN: MIPAEV
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 29 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 97035623 EMBASE
DOCUMENT NUMBER: 1997035623
TITLE: Autodisplay: One-component system for efficient surface display and release of soluble recombinant proteins from Escherichia coli.
AUTHOR: Maurer J.; Jose J.; Meyer T.F.
CORPORATE SOURCE: T.F. Meyer, Max-Planck-Institut fur Biologie, Abteilung Infektionsbiologie, Spemannstr. 34, 72076 Tubingen, Germany
SOURCE: Journal of Bacteriology, (1997) 179/3 (794-804).
Refs: 47
ISSN: 0021-9193 CODEN: JOBAAY
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
027 Biophysics, Bioengineering and Medical Instrumentation
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 30 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 96380478 EMBASE
DOCUMENT NUMBER: 1996380478
TITLE: Phase-variable **outer membrane** proteins in Escherichia coli.
AUTHOR: Owen P.; Meehan M.; De Loughry-Doherty H.; Henderson I.
CORPORATE SOURCE: Department of Microbiology, Moyne Inst. of Preventive Medicine, Trinity College,Dublin 2, Ireland
SOURCE: FEMS Immunology and Medical Microbiology, (1996) 16/2 (63-76).
ISSN: 0928-8244 CODEN: FIMIEV
PUBLISHER IDENT.: S 0928-8244(96)00069-7
COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 31 OF 74 EMBASE COPYRIGHT 2001 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 96310852 EMBASE

DOCUMENT NUMBER: 1996310852
TITLE: Processing of the **AIDA**-I precursor: Removal of **AIDA**(c) and evidence for the **outer membrane** anchoring as a .beta.-barrel structure.
AUTHOR: Suhr M.; Benz I.; Schmidt M.A.
CORPORATE SOURCE: Institut fur Infektiologie, ZMBE, Von-Esmarch-Strasse 56,D-48149 Munster, Germany
SOURCE: Molecular Microbiology, (1996) 22/1 (31-42).
ISSN: 0950-382X CODEN: MOMIEE
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 32 OF 74 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 2001:37986 LIFESCI
TITLE: Identification and characterisation of a novel conserved **outer membrane** protein from Neisseria meningitidis
AUTHOR: Peak, I.R.A.; Srikhanta, Y.; Dieckelmann, M.; Moxon, E.R.; Jennings, M.P.*
CORPORATE SOURCE: Department of Microbiology and Parasitology, The University of Queensland, Brisbane, Qld., 4072, Australia; E-mail: jennings@biosci.uq.edu.au
SOURCE: FEMS Immunology and Medical Microbiology [FEMS Immunol. Med. Microbiol.], (20000801) vol. 28, no. 4, pp. 329-334.
ISSN: 0928-8244.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 33 OF 74 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 2000:112388 LIFESCI
TITLE: Autodisplay: Functional Display of Active beta -Lactamase on the Surface of Escherichia coli by the **AIDA**-I Autotransporter
AUTHOR: Lattemann, C.T.; Maurer, J.; Gerland, E.; Meyer, T.F. *
CORPORATE SOURCE: Max-Planck-Institut fuer Infektionsbiologie, Monbijoustr. 2, D-10117 Berlin, Germany; E-mail: meyer@mpiib-berlin.mpg.de
SOURCE: Journal of Bacteriology [J. Bacteriol.], (20000700) vol. 182, no. 13, pp. 3726-3733.
ISSN: 0021-9193.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 34 OF 74 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 2000:64494 LIFESCI
TITLE: Cell surface presentation of recombinant (poly-) peptides including functional T-cell epitopes by the **AIDA** autotransporter system
AUTHOR: Konieczny, M.P.J.; Suhr, M.; Noll, A.; Autenrieth, I.B.; Alexander Schmidt, M.*
CORPORATE SOURCE: Institut fur Infektiologie-Zentrum fur Molekularbiologie der Entzundung (ZMBE), Westfalische Wilhelms-Universitat Munster, Von-Esmarch-Str. 56, 48149 Munster Germany
SOURCE: FEMS Immunology and Medical Microbiology [FEMS Immunol. Med. Microbiol.], (20000401) vol. 27, no. 4, pp. 321-332.
ISSN: 0928-8244.
DOCUMENT TYPE: Journal

FILE SEGMENT: F; J
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 35 OF 74 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 2000:8502 LIFESCI
TITLE: Characterization of the Essential Transport Function of the **AIDA**-I Autotransporter and Evidence Supporting Structural Predictions
AUTHOR: Maurer, J.; Jose, J.; Meyer, T.F.*
CORPORATE SOURCE: Max-Planck-Institut fuer Infektionsbiologie, Abteilung Molekulare Biologie, Monbijoustrasse 2, D-10117 Berlin, Germany; E-mail: meyer@mpiib-berlin.mpg.de
SOURCE: Journal of Bacteriology [J. Bacteriol.], (19991100) vol. 181, no. 22, pp. 7014-7020.
ISSN: 0021-9193.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 36 OF 74 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 1999:93715 LIFESCI
TITLE: Identification of a glycoprotein produced by enterotoxigenic Escherichia coli
AUTHOR: Lindenthal, Ch.; Elsinghorst, E.A.*
CORPORATE SOURCE: University of Kansas, Department of Molecular Biosciences, 7049 Haworth Hall, Lawrence, KS 66045-2106, USA; E-mail: elsingh@ukans.edu
SOURCE: Infection and Immunity [Infect. Immun.], (19990800) vol. 67, no. 8, pp. 4084-4091.
ISSN: 0019-9567.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 37 OF 74 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 1999:55211 LIFESCI
TITLE: Tetranucleotide repeats identify novel virulence determinant homologues in Neisseria meningitidis
AUTHOR: Peak, I.R.A.; Jennings, M.P.; Hood, D.W.; Moxon, E.R.
CORPORATE SOURCE: Department of Microbiology, The University of Queensland, Brisbane, QLD 4072, Australia; E-mail: peak@biosci.uq.edu.au
SOURCE: Microbial Pathogenesis [Microb. Pathog.], (19990100) vol. 26, no. 1, pp. 13-23.
ISSN: 0882-4010.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 38 OF 74 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 97:40701 LIFESCI
TITLE: Autodisplay: One-component system for efficient surface display and release of soluble recombinant proteins from Escherichia coli
AUTHOR: Maurer, J.; Jose, J.; Meyer, T.F.*
CORPORATE SOURCE: Max-Planck-Inst. fuer Biologie, Abteilung Infektionsbiologie, Spemannstr. 34, 72076 Tuebingen, FRG
SOURCE: J. BACTERIOL., (1997) vol. 179, no. 3, pp. 794-804.
ISSN: 0021-9193.
DOCUMENT TYPE: Journal

FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 39 OF 74 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 97:27746 LIFESCI
TITLE: Phase-variable **outer membrane** proteins in Escherichia coli
AUTHOR: Owen, P.; Meehan, M.; De Loughry-Doherty, H.; Henderson, I.
CORPORATE SOURCE: Department of Microbiology, Moyne Institute of Preventive Medicine, Trinity College Dublin, Dublin 2, Ireland
SOURCE: FEMS IMMUNOL. MED. MICROBIOL., (1996) vol. 16, no. 2, pp. 63-76.
ISSN: 0928-8244.
DOCUMENT TYPE: Journal
TREATMENT CODE: General Review
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 40 OF 74 LIFESCI COPYRIGHT 2001 CSA
ACCESSION NUMBER: 97:4521 LIFESCI
TITLE: Processing of the **AIDA**-I precursor: Removal of **AIDA** super(c) and evidence for the **outer membrane** anchoring as a beta -barrel structure
AUTHOR: Suhr, M.; Benz, I.; Schmidt, M.A.*
CORPORATE SOURCE: Inst. fuer Infektiologie, Zentrum fuer Molekularbiologie der Entzuendung (ZMBE), Von-Esmarch-Str. 56, D-48149 Muenster, FRG
SOURCE: MOL. MICROBIOL., (1996) vol. 22, no. 1, pp. 31-42.
ISSN: 0950-382X.
DOCUMENT TYPE: Journal
FILE SEGMENT: J
LANGUAGE: English
SUMMARY LANGUAGE: English

L8 ANSWER 41 OF 74 MEDLINE
ACCESSION NUMBER: 2000425203 MEDLINE
DOCUMENT NUMBER: 20351333 PubMed ID: 10891657
TITLE: Identification and characterisation of a novel conserved **outer membrane** protein from Neisseria meningitidis.
AUTHOR: Peak I R; Srikhanta Y; Dieckelmann M; Moxon E R; Jennings M P
CORPORATE SOURCE: Department of Microbiology and Parasitology, The University of Queensland, Brisbane, Australia.
SOURCE: FEMS IMMUNOLOGY AND MEDICAL MICROBIOLOGY, (2000 Aug) 28 (4) 329-34.
Journal code: BP1; 9315554. ISSN: 0928-8244.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200009
ENTRY DATE: Entered STN: 20000922
Last Updated on STN: 20000922
Entered Medline: 20000914

L8 ANSWER 42 OF 74 MEDLINE
ACCESSION NUMBER: 2000396365 MEDLINE
DOCUMENT NUMBER: 20309702 PubMed ID: 10850987
TITLE: Autodisplay: functional display of active beta-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter.

AUTHOR: Lattemann C T; Maurer J; Gerland E; Meyer T F
CORPORATE SOURCE: Abteilung Infektionsbiologie, Max-Planck-Institut fur Biologie, D-72076 Tubingen, Germany.
SOURCE: JOURNAL OF BACTERIOLOGY, (2000 Jul) 182 (13) 3726-33.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000824
Last Updated on STN: 20000824
Entered Medline: 20000815

L8 ANSWER 43 OF 74 MEDLINE
ACCESSION NUMBER: 2000193544 MEDLINE
DOCUMENT NUMBER: 20193544 PubMed ID: 10727888
TITLE: Cell surface presentation of recombinant (poly-) peptides including functional T-cell epitopes by the **AIDA** autotransporter system.
AUTHOR: Konieczny M P; Suhr M; Noll A; Autenrieth I B; Alexander Schmidt M
CORPORATE SOURCE: Institut fur Infektiologie-Zentrum fur Molekularbiologie der Entzundung (ZMBE), Westfalische Wilhelms-Universitat Munster, Von-Esmarch-Str. 56, 48149, Munster, Germany.
SOURCE: FEMS IMMUNOLOGY AND MEDICAL MICROBIOLOGY, (2000 Apr) 27 (4) 321-32.
Journal code: BP1; 9315554. ISSN: 0928-8244.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200005
ENTRY DATE: Entered STN: 20000518
Last Updated on STN: 20000518
Entered Medline: 20000511

L8 ANSWER 44 OF 74 MEDLINE
ACCESSION NUMBER: 2000026814 MEDLINE
DOCUMENT NUMBER: 20026814 PubMed ID: 10559167
TITLE: Characterization of the essential transport function of the **AIDA**-I autotransporter and evidence supporting structural predictions.
AUTHOR: Maurer J; Jose J; Meyer T F
CORPORATE SOURCE: Abteilung Infektionsbiologie, Max-Planck-Institut fur Biologie, D-72076 Tubingen, Germany.
SOURCE: JOURNAL OF BACTERIOLOGY, (1999 Nov) 181 (22) 7014-20.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199912
ENTRY DATE: Entered STN: 20000113
Last Updated on STN: 20000113
Entered Medline: 19991213

L8 ANSWER 45 OF 74 MEDLINE
ACCESSION NUMBER: 1999346199 MEDLINE
DOCUMENT NUMBER: 99346199 PubMed ID: 10417177
TITLE: Identification of a glycoprotein produced by enterotoxigenic Escherichia coli.
AUTHOR: Lindenthal C; Elsinghorst E A
CORPORATE SOURCE: Department of Molecular Biosciences, University of Kansas,

Lawrence, Kansas 66045-2106, USA.
SOURCE: INFECTION AND IMMUNITY, (1999 Aug) 67 (8) 4084-91.
Journal code: GO7; 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF109215; GENBANK-AF131891
ENTRY MONTH: 199908
ENTRY DATE: Entered STN: 19990820
Last Updated on STN: 19990820
Entered Medline: 19990812

L8 ANSWER 46 OF 74 MEDLINE
ACCESSION NUMBER: 1999141213 MEDLINE
DOCUMENT NUMBER: 99141213 PubMed ID: 9973577
TITLE: Tetranucleotide repeats identify novel virulence determinant homologues in Neisseria meningitidis.
AUTHOR: Peak I R; Jennings M P; Hood D W; Moxon E R
CORPORATE SOURCE: University Department of Paediatrics, Institute of Molecular Medicine, Oxford, OX3 9DS,. U.K.peak@biosci.uq.edu.au
SOURCE: MICROBIAL PATHOGENESIS, (1999 Jan) 26 (1) 13-23.
Journal code: MIC; 8606191. ISSN: 0882-4010.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF073777; GENBANK-AF073778
ENTRY MONTH: 199904
ENTRY DATE: Entered STN: 19990504
Last Updated on STN: 19990504
Entered Medline: 19990419

L8 ANSWER 47 OF 74 MEDLINE
ACCESSION NUMBER: 97158675 MEDLINE
DOCUMENT NUMBER: 97158675 PubMed ID: 9006035
TITLE: Autodisplay: one-component system for efficient surface display and release of soluble recombinant proteins from Escherichia coli.
AUTHOR: Maurer J; Jose J; Meyer T F
CORPORATE SOURCE: Abteilung Infektionsbiologie, Max-Planck-Institut fur Biologie, Tubingen, Germany.
SOURCE: JOURNAL OF BACTERIOLOGY, (1997 Feb) 179 (3) 794-804.
Journal code: HH3; 2985120R. ISSN: 0021-9193.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X65022
ENTRY MONTH: 199702
ENTRY DATE: Entered STN: 19970313
Last Updated on STN: 20000303
Entered Medline: 19970228

L8 ANSWER 48 OF 74 MEDLINE
ACCESSION NUMBER: 97142154 MEDLINE
DOCUMENT NUMBER: 97142154 PubMed ID: 8988388
TITLE: Phase-variable **outer membrane** proteins in Escherichia coli.
AUTHOR: Owen P; Meehan M; de Loughry-Doherty H; Henderson I
CORPORATE SOURCE: Department of Microbiology, Moyne Institute of Preventive Medicine, Trinity College Dublin, Ireland.
SOURCE: FEMS IMMUNOLOGY AND MEDICAL MICROBIOLOGY, (1996 Dec 1) 16

(2) 63-76. Ref: 70
Journal code: BP1; 9315554. ISSN: 0928-8244.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199703
ENTRY DATE: Entered STN: 19970327
Last Updated on STN: 19970327
Entered Medline: 19970319

L8 ANSWER 49 OF 74 MEDLINE
ACCESSION NUMBER: 97055419 MEDLINE
DOCUMENT NUMBER: 97055419 PubMed ID: 8899706
TITLE: Processing of the **AIDA**-I precursor: removal of AIDAc and evidence for the **outer membrane** anchoring as a beta-barrel structure.
AUTHOR: Suhr M; Benz I; Schmidt M A
CORPORATE SOURCE: Institut fur Infektiologie, Zentrum fur Molekularbiologie, Entzundung (ZMBE), Munster, Germany.
SOURCE: MOLECULAR MICROBIOLOGY, (1996 Oct) 22 (1) 31-42.
Journal code: MOM; 8712028. ISSN: 0950-382X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X65022
ENTRY MONTH: 199702
ENTRY DATE: Entered STN: 19970305
Last Updated on STN: 20000303
Entered Medline: 19970219

L8 ANSWER 50 OF 74 MEDLINE
ACCESSION NUMBER: 93350332 MEDLINE
DOCUMENT NUMBER: 93350332 PubMed ID: 8347926
TITLE: Diffuse adherence of enteropathogenic Escherichia coli strains--processing of **AIDA**-I.
AUTHOR: Benz I; Schmidt M A
CORPORATE SOURCE: Zentrum fur Molekulare Biologie Heidelberg (ZMBH), Germany.
SOURCE: ZENTRALBLATT FUR BAKTERIOLOGIE, (1993 Apr) 278 (2-3) 197-208.
Journal code: BD7; 9203851. ISSN: 0934-8840.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199309
ENTRY DATE: Entered STN: 19931001
Last Updated on STN: 20000303
Entered Medline: 19930916

L8 ANSWER 51 OF 74 MEDLINE
ACCESSION NUMBER: 92326638 MEDLINE
DOCUMENT NUMBER: 92326638 PubMed ID: 1625582
TITLE: **AIDA**-I, the adhesin involved in diffuse adherence of the diarrhoeagenic Escherichia coli strain 2787 (O126:H27), is synthesized via a precursor molecule.
AUTHOR: Benz I; Schmidt M A
CORPORATE SOURCE: Zentrum fur Molekulare Biologie Heidelberg (ZMBH), Germany.
SOURCE: MOLECULAR MICROBIOLOGY, (1992 Jun) 6 (11) 1539-46.
Journal code: MOM; 8712028. ISSN: 0950-382X.
PUB. COUNTRY: ENGLAND: United Kingdom

Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-X65022
ENTRY MONTH: 199208
ENTRY DATE: Entered STN: 19920821
Last Updated on STN: 19920821
Entered Medline: 19920813

L8 ANSWER 52 OF 74 MEDLINE
ACCESSION NUMBER: 89212899 MEDLINE
DOCUMENT NUMBER: 89212899 PubMed ID: 2565291
TITLE: Cloning and expression of an adhesin (**AIDA**-I) involved in diffuse adherence of enteropathogenic Escherichia coli.
AUTHOR: Benz I; Schmidt M A
CORPORATE SOURCE: Zentrum fur Molekulare Biologie Heidelberg, Universitat Heidelberg, Federal Republic of Germany.
SOURCE: INFECTION AND IMMUNITY, (1989 May) 57 (5) 1506-11.
Journal code: GO7; 0246127. ISSN: 0019-9567.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198906
ENTRY DATE: Entered STN: 19900306
Last Updated on STN: 19950206
Entered Medline: 19890601

L8 ANSWER 53 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 2001:842958 SCISEARCH
THE GENUINE ARTICLE: 483UZ
TITLE: Modular organization of the **AIDA** autotransporter translocator: The N-terminal beta(1)-domain is surface-exposed and stabilizes the transmembrane beta(2)-domain
AUTHOR: Konieczny M P J; Benz I; Hollinderbaumer B; Beinke C; Niederweis M; Schmidt M A (Reprint)
CORPORATE SOURCE: Univ Munster, Zentrum Mol Biol Entzundung, Inst Infektiol, D-4400 Munster, Germany (Reprint); Univ Erlangen Nurnberg, Lehrstuhl Mikrobiol, Erlangen, Germany
COUNTRY OF AUTHOR: Germany
SOURCE: ANTONIE VAN LEEUWENHOEK INTERNATIONAL JOURNAL OF GENERAL AND MOLECULAR MICROBIOLOGY, (OCT 2001) Vol. 80, No. 1, pp. 19-34.
Publisher: KLUWER ACADEMIC PUBL, SPUIBOULEVARD 50, PO BOX 17, 3300 AA DORDRECHT, NETHERLANDS.
ISSN: 0003-6072.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 34
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 54 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 2001:720477 SCISEARCH
THE GENUINE ARTICLE: 470YK
TITLE: Functional display of active bovine adrenodoxin on the surface of E-coli by chemical incorporation of the [2Fe-2S] cluster
AUTHOR: Jose J (Reprint); Bernhardt R; Hannemann F
CORPORATE SOURCE: Univ Saarland, Nat Wissensch Tech Fak 3, POB 151150, D-66041 Saarbrucken, Germany (Reprint); Univ Saarland, Nat Wissensch Tech Fak 3, D-66041 Saarbrucken, Germany
COUNTRY OF AUTHOR: Germany

SOURCE: CHEMBIOCHEM, (3 SEP 2001) Vol. 2, No. 9, pp. 695-701.
Publisher: WILEY-V C H VERLAG GMBH, PO BOX 10 11 61, D-69451 BERLIN, GERMANY.
ISSN: 1439-4227.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 49
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 55 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 2001:550107 SCISEARCH
THE GENUINE ARTICLE: 447NY
TITLE: Glycosylation with heptose residues mediated by the aah gene product is essential for adherence of the **AIDA**-I adhesin
AUTHOR: Benz I; Schmidt M A (Reprint)
CORPORATE SOURCE: Univ Klinikum Munster, Zentrum Mol Biol Entzundung, Inst Infektiol, Munster, Germany (Reprint)
COUNTRY OF AUTHOR: Germany
SOURCE: MOLECULAR MICROBIOLOGY, (JUN 2001) Vol. 40, No. 6, pp. 1403-1413.
Publisher: BLACKWELL SCIENCE LTD, P O BOX 88, OSNEY MEAD, OXFORD OX2 0NE, OXON, ENGLAND.
ISSN: 0950-382X.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 43
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 56 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 2000:570123 SCISEARCH
THE GENUINE ARTICLE: 336VT
TITLE: Identification and characterisation of a novel conserved **outer membrane** protein from Neisseria meningitidis
AUTHOR: Peak I R A; Srikhanta Y; Dieckelmann M; Moxon E R; Jennings M P (Reprint)
CORPORATE SOURCE: UNIV QUEENSLAND, DEPT MICROBIOL & PARASITOL, BRISBANE, QLD 4072, AUSTRALIA (Reprint); UNIV QUEENSLAND, DEPT MICROBIOL & PARASITOL, BRISBANE, QLD 4072, AUSTRALIA; JOHN RADCLIFFE HOSP, INST MOL MED, DEPT PAEDIAT, MOL INFECT DIS GRP, OXFORD OX3 9DU, ENGLAND
COUNTRY OF AUTHOR: AUSTRALIA; ENGLAND
SOURCE: FEMS IMMUNOLOGY AND MEDICAL MICROBIOLOGY, (AUG 2000) Vol. 28, No. 4, pp. 329-334.
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
ISSN: 0928-8244.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 19
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 57 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 2000:457563 SCISEARCH
THE GENUINE ARTICLE: 324BX
TITLE: Autodisplay: Functional display of active beta-lactamase on the surface of Escherichia coli by the **AIDA**-I autotransporter
AUTHOR: Lattemann C T; Maurer J; Gerland E; Meyer T F (Reprint)
CORPORATE SOURCE: MAX PLANCK INST INFEKT BIOL, MOL BIOL ABT, MONBIJOUSTR 2, D-10117 BERLIN, GERMANY (Reprint); MAX PLANCK INST INFEKT BIOL, MOL BIOL ABT, D-10117 BERLIN, GERMANY; MAX PLANCK

INST BIOL, INFEKT BIOL ABT, D-72076 TUBINGEN, GERMANY; CREATOGEN GMBH, D-86156 AUGSBURG, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: JOURNAL OF BACTERIOLOGY, (JUL 2000) Vol. 182, No. 13, pp. 3726-3733.
Publisher: AMER SOC MICROBIOLOGY, 1752 N ST NW, WASHINGTON, DC 20036-2904.
ISSN: 0021-9193.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 39
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 58 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 2000:266647 SCISEARCH
THE GENUINE ARTICLE: 298WN
TITLE: Cell surface presentation of recombinant (poly-) peptides including functional T-cell epitopes by the **AIDA** autotransporter system
AUTHOR: Konieczny M P J; Suhr M; Noll A; Autenrieth I B; Schmidt M A (Reprint)
CORPORATE SOURCE: UNIV MUNSTER, ZENTRUM MOL BIOL ENTZUNDUNG, INST INFEKTIOL, VON ESMARCH STR 56, D-48149 MUNSTER, GERMANY (Reprint); UNIV MUNSTER, ZENTRUM MOL BIOL ENTZUNDUNG, INST INFEKTIOL, D-48149 MUNSTER, GERMANY; MAX VON PETTENKOFER INST HYG & MED MICROBIOL, D-80336 MUNICH, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: FEMS IMMUNOLOGY AND MEDICAL MICROBIOLOGY, (APR 2000) Vol. 27, No. 4, pp. 321-332.
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
ISSN: 0928-8244.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 32
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 59 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 1999:919550 SCISEARCH
THE GENUINE ARTICLE: 257PG
TITLE: Characterization of the essential transport function of the **AIDA**-I autotransporter and evidence supporting structural predictions
AUTHOR: Maurer J; Jose J; Meyer T F (Reprint)
CORPORATE SOURCE: MAX PLANCK INST INFEKT BIOL, MOL BIOL ABT, MONBIJOUSTR 2, D-10117 BERLIN, GERMANY (Reprint); MAX PLANCK INST INFEKT BIOL, MOL BIOL ABT, D-10117 BERLIN, GERMANY; MAX PLANCK INST BIOL, INFEKT BIOL ABT, D-72076 TUBINGEN, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: JOURNAL OF BACTERIOLOGY, (NOV 1999) Vol. 181, No. 22, pp. 7014-7020.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0021-9193.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 54
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 60 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 1999:588198 SCISEARCH

THE GENUINE ARTICLE: 219ZA
TITLE: Identification of a glycoprotein produced by enterotoxigenic Escherichia coli
AUTHOR: Lindenthal C; Elsinghorst E A (Reprint)
CORPORATE SOURCE: UNIV KANSAS, DEPT MOL BIOSCI, 7049 HAWORTH HALL, LAWRENCE, KS 66045 (Reprint); UNIV KANSAS, DEPT MOL BIOSCI, LAWRENCE, KS 66045
COUNTRY OF AUTHOR: USA
SOURCE: INFECTION AND IMMUNITY, (AUG 1999) Vol. 67, No. 8, pp. 4084-4091.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0019-9567.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 47
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 61 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 1999:154032 SCISEARCH
THE GENUINE ARTICLE: 166ZQ
TITLE: Tetranucleotide repeats identify novel virulence determinant homologues in Neisseria meningitidis
AUTHOR: Peak I R A (Reprint); Jennings M P; Hood D W; Moxon E R
CORPORATE SOURCE: UNIV QUEENSLAND, DEPT MICROBIOL, BRISBANE, QLD 4072, AUSTRALIA (Reprint); UNIV OXFORD, JOHN RADCLIFFE HOSP, INST MOL MED, DEPT PAEDIAT, MOL INFECT DIS GRP, OXFORD OX3 9DS, ENGLAND
COUNTRY OF AUTHOR: AUSTRALIA; ENGLAND
SOURCE: MICROBIAL PATHOGENESIS, (JAN 1999) Vol. 26, No. 1, pp. 13-23.
Publisher: ACADEMIC PRESS LTD, 24-28 OVAL RD, LONDON NW1 7DX, ENGLAND.
ISSN: 0882-4010.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 18
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 62 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 97:107058 SCISEARCH
THE GENUINE ARTICLE: WE440
TITLE: Autodisplay: One-component system for efficient surface display and release of soluble recombinant proteins from Escherichia coli
AUTHOR: Maurer J; Jose J; Meyer T F (Reprint)
CORPORATE SOURCE: MAX PLANCK INST BIOL, INFEKT BIOL ABT, SPEMANNSTR 34, D-72076 TUBINGEN, GERMANY (Reprint); MAX PLANCK INST BIOL, INFEKT BIOL ABT, D-72076 TUBINGEN, GERMANY; MAX PLANCK INST INFEKT BIOL, MOL BIOL ABT, D-10117 BERLIN, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: JOURNAL OF BACTERIOLOGY, (FEB 1997) Vol. 179, No. 3, pp. 794-804.
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW, WASHINGTON, DC 20005-4171.
ISSN: 0021-9193.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 48
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 63 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 97:19229 SCISEARCH
THE GENUINE ARTICLE: VZ116
TITLE: Phase-variable **outer membrane** proteins in Escherichia coli
AUTHOR: Owen P (Reprint); Meehan M; deLoughryDoherty H; Henderson I
CORPORATE SOURCE: UNIV DUBLIN TRINITY COLL, MOYNE INST PREVENT MED, DEPT MICROBIOL, DUBLIN 2, IRELAND (Reprint)
COUNTRY OF AUTHOR: IRELAND
SOURCE: FEMS IMMUNOLOGY AND MEDICAL MICROBIOLOGY, (1 DEC 1996) Vol. 16, No. 2, pp. 63-76.
Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
ISSN: 0928-8244.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 70
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 64 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 96:770286 SCISEARCH
THE GENUINE ARTICLE: VM856
TITLE: PROCESSING OF THE **AIDA**-I PRECURSOR - REMOVAL OF **AIDA**(C) AND EVIDENCE FOR THE **OUTER-MEMBRANE** ANCHORING AS A BETA-BARREL STRUCTURE
AUTHOR: SUHR M; BENZ I; SCHMIDT M A (Reprint)
CORPORATE SOURCE: ZENTRUM MOL BIOL ENTZUNDUNG, VON ESMARCH STR 56, D-48149 MUNSTER, GERMANY (Reprint); ZENTRUM MOL BIOL ENTZUNDUNG, D-48149 MUNSTER, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: MOLECULAR MICROBIOLOGY, (OCT 1996) Vol. 22, No. 1, pp. 31-42.
ISSN: 0950-382X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 55
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 65 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 96:650957 SCISEARCH
THE GENUINE ARTICLE: VE443
TITLE: CHARACTERIZATION OF A NOVEL HEMAGGLUTININ OF DIARRHEA-ASSOCIATED ESCHERICHIA-COLI THAT HAS CHARACTERISTICS OF DIFFUSELY ADHERING ESCHERICHIA-COLI AND ENTEROAGGREGATIVE ESCHERICHIA-COLI
AUTHOR: YAMAMOTO T (Reprint); WAKISAKA N; NAKAE T; KAMANO T; SERICHANTALERGS O; ECHEVERRIA P
CORPORATE SOURCE: INT MED CTR JAPAN, RES INST, DEPT INFECT DIS, SHINJUKU KU, 1-21-2 TOYAMA, TOKYO, JAPAN (Reprint); INT MED CTR JAPAN, RES INST, DEPT TROP MED, SHINJUKU KU, TOKYO, JAPAN; JUNTENDO UNIV, SCH MED, DEPT SURG 1, TOKYO 113, JAPAN; TOKAI UNIV, SCH MED, INST MED SCI, ISEHARA, KANAGAWA 25911, JAPAN; ARMED FORCES RES INST MED SCI, DEPT BACTERIOL IMMUNOL & MOL GENET, BANGKOK, THAILAND
COUNTRY OF AUTHOR: JAPAN; THAILAND
SOURCE: INFECTION AND IMMUNITY, (SEP 1996) Vol. 64, No. 9, pp. 3694-3702.
ISSN: 0019-9567.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH

REFERENCE COUNT: 40
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 66 OF 74 SCISEARCH COPYRIGHT 2001 ISI (R)
ACCESSION NUMBER: 96:59314 SCISEARCH
THE GENUINE ARTICLE: TN444
TITLE: EXTRACELLULAR TRANSPORT OF VIRG PROTEIN IN SHIGELLA
AUTHOR: SUZUKI T; LETT M C; SASAKAWA C (Reprint)
CORPORATE SOURCE: UNIV TOKYO, INST MED SCI, DEPT BACTERIOL, MINATO KU, 4-6-1 SHIROKANEDAI, TOKYO 108, JAPAN (Reprint); UNIV TOKYO, INST MED SCI, DEPT BACTERIOL, MINATO KU, TOKYO 108, JAPAN; UNIV STRASBOURG 1, CNRS, URA D 1481, INST BOT, LAB MICROBIOL & GENET, F-67083 STRASBOURG, FRANCE
COUNTRY OF AUTHOR: JAPAN; FRANCE
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (29 DEC 1995) Vol. 270, No. 52, pp. 30874-30880.
ISSN: 0021-9258.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 56
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

L8 ANSWER 67 OF 74 USPATFULL
ACCESSION NUMBER: 2001:191256 USPATFULL
TITLE: USPA1 and USPA2 antigens of Moraxella catarrhalis
INVENTOR(S): Hansen, Eric J., Plano, TX, United States
Aebi, Christoph, Gasel, Switzerland
Cope, Leslie D., Mesquite, TX, United States
Maciver, Isobel, Cottage Grove, WI, United States
Fiske, Michael J., Rochester, NY, United States
Fredenburg, Ross A., Rochester, NY, United States
PATENT ASSIGNEE(S): Board of Regents, The University of Texas, Austin, TX, United States (U.S. corporation)
American Cyanamid, Madison, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6310190	B1	20011030
APPLICATION INFO.:	US 1999-336447		19990621 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1997-US23930, filed on 19 Dec 1997

	NUMBER	DATE
PRIORITY INFORMATION:	US 1996-33598	19961220 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Jones, W. Gary
ASSISTANT EXAMINER: Soudaya, Jehanne
LEGAL REPRESENTATIVE: Fulbright & Jaworski
NUMBER OF CLAIMS: 2
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 28 Drawing Figure(s); 17 Drawing Page(s)
LINE COUNT: 4794
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 68 OF 74 USPATFULL
ACCESSION NUMBER: 2001:36429 USPATFULL
TITLE: Haemophilus adhesion proteins
INVENTOR(S): St. Geme, Joseph, St. Louis, MO, United States
Barenkamp, Stephen J., Webster Groves, MO, United States

PATENT ASSIGNEE(S): St. Louis University, St. Louis, MO, United States (U.S. corporation)
Washington University, St. Louis, MO, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6200578	B1	20010313	
	WO 9630519		19961003	
APPLICATION INFO.:	US 1997-913942		19971229	(8)
	WO 1996-US4031		19960322	
			19971229	PCT 371 date
			19971229	PCT 102(e) date

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-409995, filed on 24 Mar 1995, now patented, Pat. No. US 5646259
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Graser, Jennifer
LEGAL REPRESENTATIVE: Flehr, Hohbach, Test, Albritton & Herbert LLP, Trecartin, Richard F., Silva, Robin M.
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 31 Drawing Figure(s); 26 Drawing Page(s)
LINE COUNT: 1579
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 69 OF 74 USPATFULL
ACCESSION NUMBER: 2001:32810 USPATFULL
TITLE: Surface antigen
INVENTOR(S): Peak, Ian Richard Anselm, St. Lucia, Australia
Jennings, Michael Paul, Carina, Australia
Moxon, E. Richard, Oxfordshire, United Kingdom
PATENT ASSIGNEE(S): The University of Queensland, Queensland, Australia (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6197312	B1	20010306	
APPLICATION INFO.:	US 1999-377155		19990819	(9)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1998-AU1031, filed on 14 Dec 1998
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Graser, Jennifer
LEGAL REPRESENTATIVE: Foley & Lardner
NUMBER OF CLAIMS: 26
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 15 Drawing Figure(s); 15 Drawing Page(s)
LINE COUNT: 1611
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 70 OF 74 USPATFULL
ACCESSION NUMBER: 2000:57355 USPATFULL
TITLE: Haemophilus adhesion proteins
INVENTOR(S): St. Geme, III, Joseph W., St. Louis, MO, United States
Barenkamp, Stephen J., Webster Groves, MO, United States
PATENT ASSIGNEE(S): Washington University, St. Louis, MO, United States (U.S. corporation)
St. Louis University, St. Louis, MO, United States (U.S. corporation)

	NUMBER	KIND	DATE

PATENT INFORMATION: US 6060059 20000509
APPLICATION INFO.: US 1996-685467 19960724 (8)
RELATED APPLN. INFO.: Division of Ser. No. US 1995-409995, filed on 24 Mar 1995, now patented, Pat. No. US 5646259
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Chin, Christopher L.
ASSISTANT EXAMINER: Graser, Jennifer
LEGAL REPRESENTATIVE: Flehr Hohbach Test Albritton & Herbert LLP, Trecartin, Richard F., Silva, Robin M.
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 19 Drawing Page(s)
LINE COUNT: 1532
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 71 OF 74 USPATFULL
ACCESSION NUMBER: 1998:48577 USPATFULL
TITLE: Process for the depletion or removal of endotoxins
INVENTOR(S): Colpan, Metin, Essen, Germany, Federal Republic of
Moritz, Peter, Kerpen, Germany, Federal Republic of
Schorr, Joachim, Dussedorf, Germany, Federal Republic of
PATENT ASSIGNEE(S): Qiagen GmbH, Hilden, Germany, Federal Republic of (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5747663		19980505	
	WO 9521179		19950810	
APPLICATION INFO.:	US 1996-687522		19960930	(8)
	WO 1995-EP391		19950203	
			19960930	PCT 371 date
			19960930	PCT 102(e) date

	NUMBER	DATE
PRIORITY INFORMATION:	DE 1994-4403692	19940207
	DE 1994-4422291	19940625
	DE 1994-4431125	19940901
	DE 1994-4432654	19940914

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lilling, Herbert J.
LEGAL REPRESENTATIVE: Jacobson, Price, Holman & Stern, PLLC
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
LINE COUNT: 349
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 72 OF 74 USPATFULL
ACCESSION NUMBER: 1998:19813 USPATFULL
TITLE: Vacuolating toxin-deficient H. pylori
INVENTOR(S): Cover, Timothy L., Nashville, TN, United States
Blaser, Martin J., Nashville, TN, United States
PATENT ASSIGNEE(S): Vanderbilt University, Nashville, TN, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5721349		19980224	
APPLICATION INFO.:	US 1994-200232		19940223	(8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1992-841644, filed on 26 Feb 1992, now abandoned			

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Sidberry, Hazel F.
LEGAL REPRESENTATIVE: Needle & Rosenberg, P.C.
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
LINE COUNT: 1466
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 73 OF 74 USPATFULL
ACCESSION NUMBER: 97:59316 USPATFULL
TITLE: DNA encoding haemophilus adhesion proteins
INVENTOR(S): St. Geme, III, Joseph W., St. Louis, MO, United States
Barenkamp, Stephen J., Webster Groves, MO, United States
PATENT ASSIGNEE(S): St. Louis University, St. Louis, MO, United States (U.S. corporation)
Washington University, St. Louis, MO, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5646259		19970708	
APPLICATION INFO.:	US 1995-409995		19950324	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Housel, James C.
ASSISTANT EXAMINER: Shaver, Jennifer
LEGAL REPRESENTATIVE: Flehr, Hohbach, Test, Albritton & Herbert, Trecartin, Richard F., Silva, Robin M.
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Figure(s); 20 Drawing Page(s)
LINE COUNT: 1345
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 74 OF 74 USPATFULL
ACCESSION NUMBER: 95:34052 USPATFULL
TITLE: Assays for O.sup.6 -methylguanine-DNA methyltransferase
INVENTOR(S): Yarosh, Daniel B., Merrick, NY, United States
PATENT ASSIGNEE(S): Applied Genetics Inc., Freeport, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5407804		19950418	
APPLICATION INFO.:	US 1992-887733		19920522	(7)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lacey, David L.
ASSISTANT EXAMINER: Krikorian, Jacqueline G.
LEGAL REPRESENTATIVE: Klee, Maurice M.
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 1157
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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